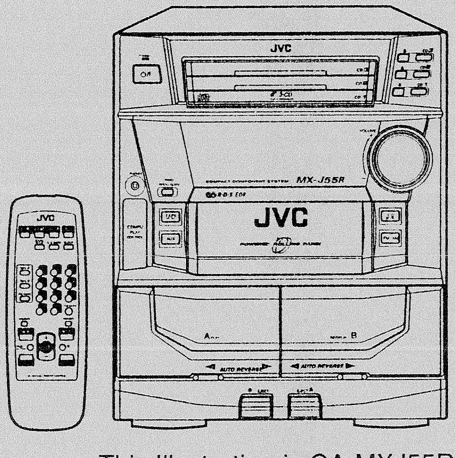
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-MXJ55R / CA-MXJ530R



This Illustration is CA-MXJ55R

Area Suffix(CA-MXJ55R)	
B	U.K.
E	Continental Europe
EN	Northern Europe
EV	Eastern Europe
EE	Russian Europe

Area Suffix(CA-MXJ530R)	
B	U.K.
E	Continental Europe
EN	Northern Europe
EV	Eastern Europe

Each difference point

Model	Color
CA-MXJ55R	Light silver
CA-MXJ530R	Light silver + Gray

COMPACT disc DIGITAL AUDIO

R·D·S EON

Contents

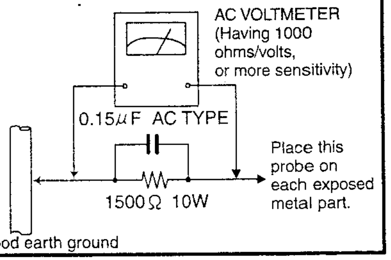
Safety Precautions ---------- 1-2
Important for laser products ---------- 1-3
Instructions ---------- 1-4
Description of major ICs ---------- 2-1
Internal connection of FL display tube ---------- 2-14
Disassembly method ---------- 2-16
Flow of functional operation until TOC read ---------- 2-35
Maintenance of laser pickup ---------- 2-36
Replacement of laser pickup ---------- 2-36
Adjustment method ---------- 2-37
Diagnosis which uses extension wire method ---------- 2-41
Block diagram ---------- 2-42
Standard schematic diagrams ---------- 2-43
Printed circuit boards ---------- 2-53
Parts List ---------- 3-1~27

COPYRIGHT © 1999 VICTOR COMPANY OF JAPAN, LTD.

No.20759
Apr. 1999

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - ● Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - ● Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now reverse the plug in the AC outlet and repeat each measurement voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volts, or more sensitivity)
0.15μF AC TYPE
1500Ω 10W
Place this probe on each exposed metal part.
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ *CAUTION* **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ *CAUTION* **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

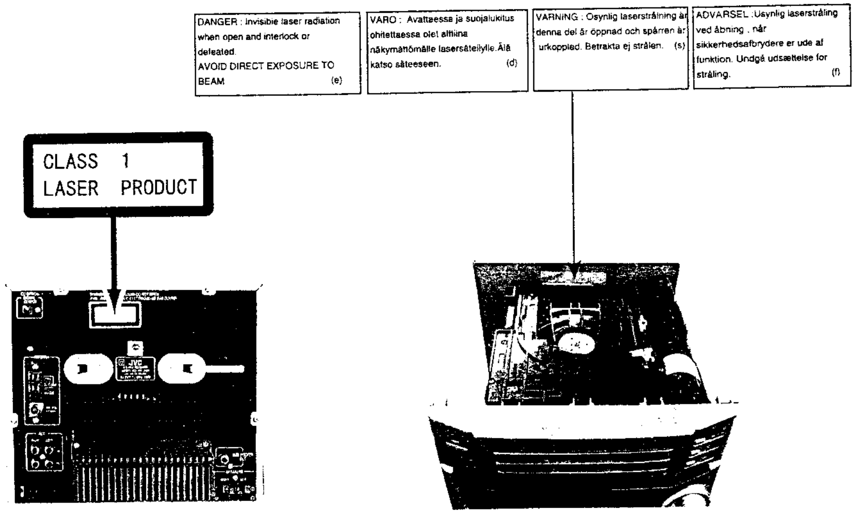
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL


DANGER : Invisible laser radiation when open and interlock or defeated.
AVOID DIRECT EXPOSURE TO BEAM (e)

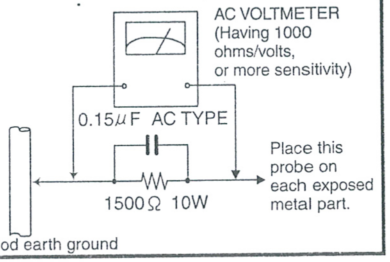
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen. (d)

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen. (s)

ADVARSEL :Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (f)

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now reverse the plug in the AC outlet and repeat each measurement voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ *CAUTION* **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ *CAUTION* **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

VARNING : Osynlig laserstrålning är denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

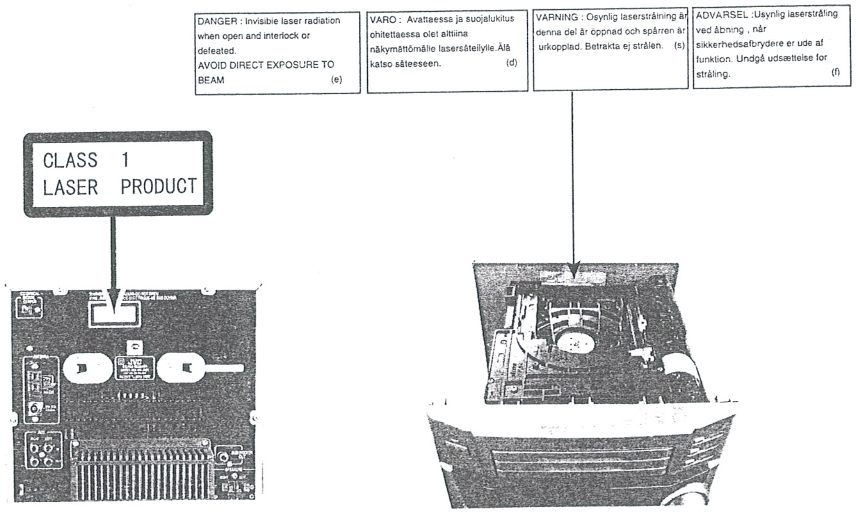
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL



DANGER : Invisibie laser radiation when open and interlock or defeated.
AVOID DIRECT EXPOSURE TO BEAM (e)

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen. (d)

VARNING : Osynlig laserstrålning är denna del är öppnad och spärren är urkopplad. Betrakta ej strålen. (s)

ADVARSEL :Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. (f)

CLASS 1
LASER PRODUCT

JVC

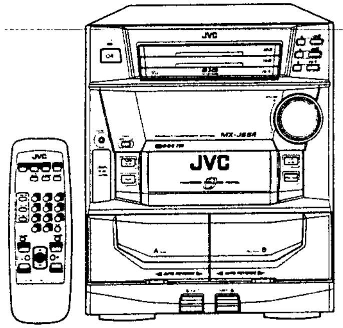
COMPACT COMPONENT SYSTEM

KOMPAKT-KOMPONENTEN-SYSTEM
SYSTEME DE COMPOSANTS COMPACT
KOMPACTO KOMPONENTEN-SYSTEEM
SISTEMAS DE COMPONENTES COMPACTOS
IMPIANTO A COMPONENTI COMPATTO

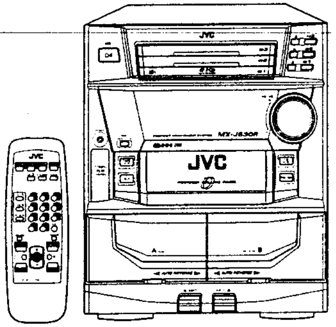
CA-MXJ55R/CA-MXJ530R

R·D·S EON

COMPACT disc DIGITAL AUDIO



CA-MXJ55R



CA-MXJ530R

INSTRUCTIONS

BEDIENUNGSANLEITUNG
MANUEL D'INSTRUCTIONS
GEBRUIKSAANWIJZING
MANUAL DE INSTRUCCIONES
ISTRUZIONI

For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No. ____________

Serial No. ____________

GVT0012-006A
[E]

Warnings, Cautions and Others / Warnung, Achtung und sonstige Hinweise /Mises en garde, précautions et indications diverses /Waarschuwingen, voorzorgen en andere mededelingen/Avisos, precauciones y otras notas / Avvertenze e precauzioni da osservare

IMPORTANT for the U.K.

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted.

If nontheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT:

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.

Per l'Italia:
"Si dichiara che il questo prodotto di marca JVC è conforme alle prescrizioni del Decreto Ministeriale n.548 del 28/08/95 pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana n.301 del 28/12/95."

CA-MXJ55R/CA-MXJ530R

Instructions (MX-J50)

CAUTION
To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

ACHTUNG
Zur Verhinderung von elektrischen Schlägen, Brandgefahr, usw:
1. Keine Schrauben lösen oder Abdeckungen entfernen und das Gehäuse nicht öffnen.
2. Dieses Gerät weder Regen noch Feuchtigkeit aussetzen.

ATTENTION
Afin d'éviter tout risque d'électrocution, d'incendie, etc :
1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

VOORZICHTIG
Ter vermindering van gevaar voor brand, elektrische schokken, enz.:
1. Verwijder geen schroeven, panelen of de behuizing
2. Stel het toestel niet bloot aan regen of vocht

PRECAUCIÓN
Para reducir riesgos de choques eléctricos, incendio, etc.:
1. No extraiga los tornillos, los cubiertas ni la caja.
2. No exponga este aparato a la lluvia o a la humedad.

ATTENZIONE
Per ridurre il rischio di shock elettrici, incendi, ecc ..
1. Non togliete viti, coperchi o la scatola.
2. Non esponete l'apparecchio alla piogggia e all'umidità.

Caution — ⏻/I switch!
Disconnect the mains plug to shut the power off completely. The ⏻/I switch in any position does not disconnect the mains line. The power can be remote controlled.

Achtung — ⏻/I-Schalter!
Den Netzstecker aus der Steckdose ziehen, um die Stromversorgung vollkommen zu unterbrechen. Der Schalter ⏻/I unterbrichet in keiner Stellung die Stromversorgung vollkommen. Die Stromversorgung kann mit der Fernbedienung ein- und ausgeschaltet werden.

Attention — Commutateur ⏻/I
Déconnecter la fiche de secteur pour couper complètement le courant. Le commutateur ⏻/I ne coupe jamais complètement la ligne de secteur, quelle que soit sa position. Le courant peut être télécommandé.

Voorzichtig — ⏻/I schakelaar!
Om de stroomtoevoer geheel uit te schakelen, trekt u de stekker uit het stopkontakt. Anders zal er altijd een geringe hoeveelheid stroom naar het apparaat lopen, ongeacht de stand van de ⏻/I schakelaar. U kunt het apparaat ook met de afstandsbediening aan- en uitschakelen.

Precaución — Interruptor ⏻/I
Desconectar el cable de alimentación para desactivar la alimentación totalmente. Cualquier que sea la posición de ajuste del interruptor ⏻/I, la alimentación no es cortada completamente. La alimentación puede ser controlada remotamente.

Attenzione — L'Interruttore ⏻/I
Disinserire la spina del cavo di alimentazione dalla presa della rete elettrica per staccare completamente l'alimentazione. L'interruttore ⏻/I in nessuna posizione stacca la linea di alimentazione elettrica principale. È possibile il controllo remoto dell'alimentazione.

Caution: Proper Ventilation
To avoid risk of electric shock and fire, and to prevent damage, locate the apparatus as follows:
1 Front:
  No obstructions and open spacing
2 Sides/ Top/ Back:
  No obstructions should be placed in the areas shown by the dimensions below.
3 Bottom:
  Place on the level surface. Maintain an adequate air path for ventilation by placing on a stand with a height of 10 cm or more.

Achtung: Ausreichende Belüftung
Zur Vermeidung von elektrischen Schlägen, Feuer und sonstigen Schäden sollte das Gerät unter folgenden Bedingungen aufgestellt werden:
1 Vorderseite:
  Hindernisfrei und gut zugänglich.
2 Seiten- und Rückwände:
  Hindernisfrei in allen gegebenen Abständen (s. Abbildung).
3 Unterseite:
  Die Stellfläche muß absolut eben sein. Sorgen Sie für ausreichende Luftzufuhr durch Aufstellung auf einem Stand mit mindestens 10 cm Höhe.

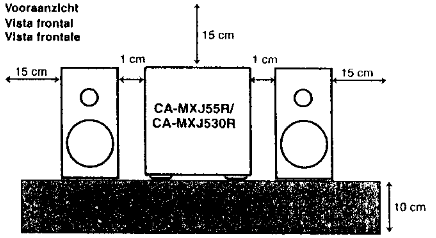
Attention: Aération correcte
Pour prévenir tout risque de décharge électrique ou d'incendie et éviter toute détérioration, installez l'appareil de la manière suivante:
1 Avant:
  Bien dégagé de tout objet.
2 Côtés/dessus/dessous:
  Assurez-vous que rien ne bloque les espaces indiqués sur le schéma ci-dessous.
3 Dessous:
  Posez l'appareil sur une surface plane et horizontale. Veillez à ce que sa ventilation correcte puisse se faire en le plaçant sur un support d'au moins dix centimètres de hauteur.

Voorzichtig: Goede ventilatie vereist
Om brand, elektrische schokken en beschadiging te voorkomen, moet u het toestel als volgt opstellen:
1 Voorkant:
  Geen belemmeringen en voldoende ruimte.
2 Zijkanten/boven-/onderkant:
  Geen belemmeringen plaatsen in de hieronder aangegeven zones
3 Onderkant:
  Op vlakke ondergrond plaatsen. Voldoende ventilatieruimte voorzien door het toestel op een onderstel met een hoogte van 10 cm of meer te plaatsen

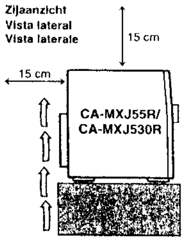
Precaución: ventilación correcta
Para evitar el riesgo de descargas eléctricas e incendio y prevenir posibles daños, instale el equipo en un lugar que cumpla los siguientes requisitos:
1 Parte frontal:
  Sin obstrucciones, espacio abierto.
2 Lados/parte superior/parte posterior.
  No debe haber ninguna obstrucción en las áreas mostradas por las dimensiones de la siguiente figura.
3 Parte inferior:
  Sitúe el equipo sobre una superficie nivelada. Mantenga un espacio adecuado para permitir el paso del aire y una correcta ventilación, situando el equipo sobre un soporte de 10 o más cm de altura.

Attenzione: Per una corretta ventilazione
Per prevenire il rischio di scosse elettriche e di incendio ed evitare possibili danni, collocare le apparecchiature nel modo seguente:
1 Parte anteriore:
  Nessun ostacolo e spazio libero.
2 Lati/Parte superiore/Retro:
  Lasciare libere le zone indicate dalle dimensioni di seguito
3 Base:
  Collocare su una superficie piana. Consentire un'adeguata ventilazione dell'impianto appoggiandolo su un tavolinetto alto almeno 10 cm.

Front view
Vorderansicht
Face
Vooraanzicht
Vista frontal
Vista frontale



Side view
Seitenansicht
Côté
Zijaanzicht
Vista lateral
Vista laterale

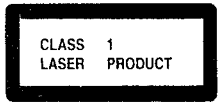


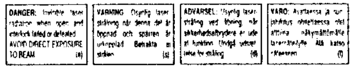
IMPORTANT FOR LASER PRODUCTS/ WICHTIGER HINWEIS FÜR LASER-PRODUKTE / IMPORTANT POUR LES PRODUITS LASER / *BELANGRIJKE INFORMATIE VOOR LASERPRODUKTEN* / IMPORTANTE PARA LOS PRODUCTOS LÁSER / IMPORTANTE PER I PRODOTTI LASER

REPRODUCTION OF LABELS/ANBRINGUNGSORTE FÜR LASER-PRODUKTE/REPRODUCTION DES ETIQUETTES/VERKLARING VAN DE LABELS/REPRODUCCIÓN DE ETIQUETAS/RIPRODUZIONE DELLE ETICHETTE

① CLASSIFICATION LABEL, PLACED ON REAR ENCLOSURE
① KLASSIFIKATIONSETIKETTE AN DER RÜCKSEITE
① ETIQUETTE DE CLASSIFICATION, PLACÉE A L'ARRIÈRE DU COFFRET
① KLASSIFIKATIELABEL, OP DE ACHTERZIJDE VAN HET APPARAAT
① ETIQUETA DE CLASIFICACIÓN, PEGADA EN LA PARTE POSTERIOR DE LA CAJA
① ETICHETTA DI CLASSIFICAZIONE, SITUATA SUL RIVESTIMENTO POSTERIORE

② WARNING LABEL, PLACED INSIDE THE UNIT
② WARNETIKETTE IM GERÄTEINNEREN
② ETIQUETTE D'AVERTISSEMENT PLACÉE À L'INTERIEUR DE L'APPAREIL
② WAARSCHUWINGSLABEL, IN HET APPARAAT
② ETIQUETA DE ADVERTENCIA, PEGADA EN EL INTERIOR DE LA UNIDAD
② ETICHETTA DI AVVERTENZA, SITUATA ALL'INTERNO DELL'APPARECCHIO


CLASS 1
LASER PRODUCT


DANGER: Invisible laser radiation when open and interlock failed or defeated AVOID DIRECT EXPOSURE TO BEAM (e)

1. CLASS 1 LASER PRODUCT
2. **DANGER**: Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam
3. **CAUTION**: Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.

1. LASER-PRODUKT DER KLASSE 1
2. **GEFAHR:** Unsichtbare Laserstrahlung bei Öffnung und fehlerhafter oder beschädigter Spre Direkten Kontakt mit dem Strahl vermeiden!
3. **ACHTUNG:** Das Gehäuse nicht öffnen. Das Gerät enthält keinerlei Teile, die vom Benutzer gewartet werden können. Überlassen Sie Wartungsarbeiten bitte qualifizierten Kundendienst-Fachleuten.

1. PRODUIT LASER CLASSE 1
2. **ATTENTION:** Radiation laser invisible quand l'appareil est ouvert ou que le verrouillage est en panne ou désactivé. Eviter une exposition directe au rayon.
3. **ATTENTION:** Ne pas ouvrir le couvercle du dessus. Il n'y a aucune pièce utilisable à l'intériour. Laisser à un personnel qualifié le soin de réparer votre appareil.

1. KLAS 1 LASERPRODUKT
2. **GEVAARLIJK**: Onzichtbare laserstraling wanneer open en de beveiliging faalt of uitgeschakeld is. Voorkom het direkt blootstaan aan de straal.
3. **VOORZICHTIG**: De bovenkap niet openen. Binnenin het toestel bevinden zich geen door de gebruiker te repareren onderdelen: laat onderhoud over aan bekwaam vakpersoneel.

1. PRODUCTO LASER CLASE 1
2. **PELIGRO**: En el interior hay radiación láser invisible. Evite el contacto directo con el haz.
3. **PRECAUCIÓN**: No abra la tapa superior. En el interior de la unidad no existen piezas reparables por el usuarlo; deje todo servicio técnico en manos de personal calificado

1. PRODOTTO LASER CLASSE 1
2. **PERICOLO:** Radiazione laser invisibile quando l'apparecchio è aperto ed il dispositivo di sicurezza è guasto o disattivato. Evitare l'esposizione diretta ai raggi.
3. **ATTENZIONE:** Non aprire il coperchio superiore. Non vi sono parti adoperabili dall'utente all'interno di questo apparecchio; lasciare tutti I controlli a personale qualificato.

Introduction

We would like to thank you for purchasing one of our JVC products. Before operating this unit, read this manual carefully and thoroughly to obtain the best possible performance from your unit, and retain this manual for future reference.

About This Manual

This manual is organized as follows:

- **The manual mainly explains operations using the buttons and controls on the unit. You can also use the buttons on the remote control if they have the same or similar names (or marks) as those on the unit.**
  If operation using the remote control is different from that using the unit, it is then explained.
- Basic and common information that is the same for many functions is grouped in one place, and is not repeated in each procedure. For instance, we do not repeat the information about turning on/off the unit, setting the volume, changing the sound effects, and others, which are explained in the section "Common Operations" on pages 9 to 11.
- The following marks are used in this manual:

STOP! Gives you warnings and cautions to prevent from a damage or risk of fire/electric shock. Also gives you information which is not good for obtaining the best possible performance from the unit.

notes Gives you information and hints you had better know.

Precautions

Installation

- Install in a place which is level, dry and neither too hot nor too cold — between 5°C (41°F) and 35°C (95°F).
- Install the unit in a location with adequate ventilation to prevent internal heat built-up in the unit.
- Leave sufficient distance between the unit and the TV.
- Keep the speakers away from the TV to avoid interference with TV.

STOP! DO NOT install the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust or vibration.

Power sources

- When unplugging from the wall outlet, always pull the plug, not the AC power cord.

STOP! DO NOT handle the AC power cord with wet hands.

Moisture condensation

Moisture may condense on the lens inside the unit in the following cases:

- After starting heating in the room
- In a damp room
- If the unit is brought directly from a cold to a warm place

Should this occur, the unit may malfunction. In this case, leave the unit turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

Others

- Should any metallic object or liquid fall into the unit, unplug the unit and consult your dealer before operating any further.
- If you are not going to operate the unit for an extended period of time, unplug the AC power cord from the wall outlet.

STOP! DO NOT disassemble the unit since there are no user serviceable parts inside.

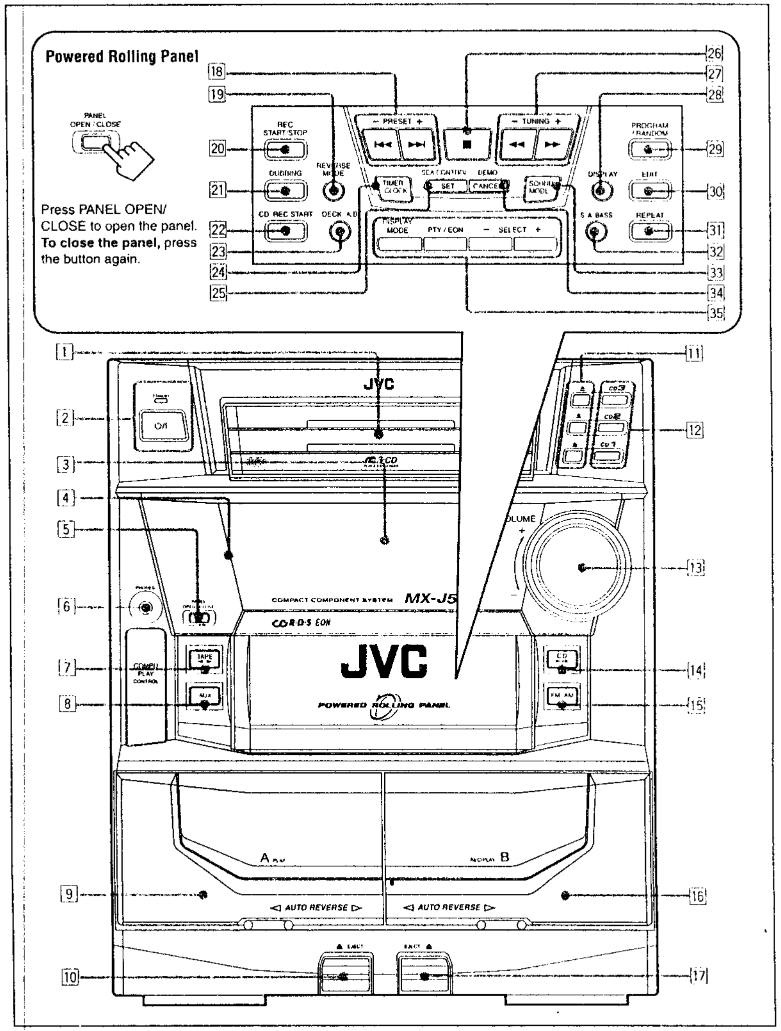
If anything goes wrong, unplug the AC power cord and consult your dealer.

Contents

Location of the Buttons and Controls 3
    Front Panel 4
    Remote Control 5
Getting Started 6
    Unpacking 6
    Putting the Batteries into the Remote Control 6
    Connecting Antennas 6
    Connecting Speakers 7
    Connecting Other Equipment 8
Common Operations 9
    Setting the Clock 9
    Turning On the Power and Selecting the Sources 9
    Adjusting the Volume 10
    Reinforcing the Bass Sound 10
    Selecting the Sound Modes 10
    Creating Your Own Sound Mode — Manual Mode 11
Listening to FM and AM (MW/LW) Broadcasts 12
    Tuning in a Station 12
    Presetting Stations 12
    Tuning in a Preset Station 12
Receiving FM Stations with RDS 13
    Changing the RDS Information 13
    Searching for Programs by PTY Codes (PTY Search) 13
    Switching to a Program Type of Your Choice Temporarily 14
Playing Back CDs 15
    Loading CDs 15
    Playing Back the Entire Discs -- Continuous Play 15
    Basic CD Operations 15
    Programming the Playing Order of the Tracks — Program Play 16
    Playing at Random — Random Play 17
    Repeating Tracks or CDs — Repeat Play 17
    Prohibiting Disc Ejection — Tray Lock 17
Playing Back Tapes 18
    Playing Back a Tape 18
    Locating the Beginning of a Song — Music Scan 18
Recording 19
    Recording Tapes on Deck B 19
    Dubbing Tapes 20
    CD Direct Recording 20
    Auto Edit Recording 21
Using the Timers 22
    Using Daily Timer 22
    Using Recording Timer 23
    Using Sleep Timer 24
    Timer Priority 24
Additional Information 25
Maintenance 25
Troubleshooting 26
Specifications 26

Location of the Buttons and Controls

Become familiar with the buttons and controls on your unit.

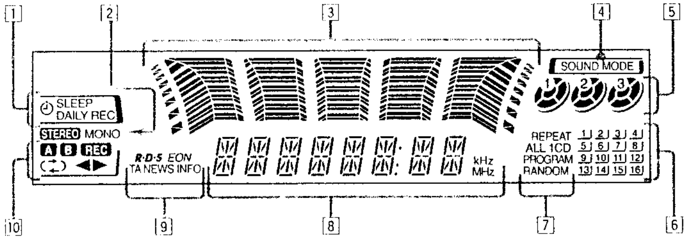

Powered Rolling Panel
PANEL OPEN/CLOSE
REC START/STOP
REVERSE MODE
DUBBING
CD REC START
DECK A.B
– PRESET +
– TUNING +
TIMER CLOCK
SEA CONTROL
SET
DEMO
CANCEL
SOUND MODE
DISPLAY MODE
PTY / EON
– SELECT +
PROGRAM /RANDOM
DISPLAY
EDIT
S.A.BASS
REPEAT
JVC
VOLUME
COMPACT COMPONENT SYSTEM MX-J5
CD-R·D·S EON
POWERED ROLLING PANEL
A PLAY
REC/PLAY B
AUTO REVERSE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35

Press PANEL OPEN/ CLOSE to open the panel. **To close the panel,** press the button again.

CA-MXJ55R/CA-MXJ530F

Continued

Display Window



See pages in the parentheses for details.

Front Panel

[1] Disc trays
[2] ⏻/I (standby/on) button and STANDBY lamp (9)
[3] Display window
[4] Remote sensor
[5] PANEL OPEN/CLOSE button (9)
Pressing this button also turns on the unit.
[6] PHONES jack (10)
[7] TAPE ◄ ► button and lamp (18)
Pressing this button also turns on the unit.
[8] AUX button and lamp (9)
Pressing this button also turns on the unit.
[9] Deck A cassette holder (18)
[10] ⏏ EJECT button for deck A (18)
[11] ⏏ (CD tray open/close) buttons (15)
Pressing one of these buttons also turns on the unit.
[12] Disc number buttons and lamps (CD 1, CD 2, and CD 3) (15)
Pressing one of these buttons also turns on the unit.
[13] VOLUME control (10)
[14] CD ►/❚❚ (play/pause) button and lamp (15)
Pressing this button also turns on the unit.
[15] FM/AM button and lamp (12)
Pressing this button also turns on the unit.
[16] Deck B cassette holder (19)
[17] EJECT ⏏ button for deck B (19)

Powered Rolling Panel

[18] PRESET – / + buttons (12)
|◄◄ / ►►| (reverse search/forward search) buttons (9, 11, 16, 21, 22)
[19] REVERSE MODE button (18, 20, 21)
[20] REC START/STOP button (19, 21)
[21] DUBBING button (20)
[22] CD REC START button (20, 21)
[23] DECK A/B button (18)
[24] TIMER/CLOCK button (9, 22)
[25] SET button (9, 22)
SEA CONTROL button (11)
[26] ■ (stop) button (15, 18)
[27] TUNING – / + buttons (12)
◄◄ / ►► (fast left/fast right) buttons (11, 16, 18)
[28] DISPLAY button (9)
[29] PROGRAM/RANDOM button (16, 17, 20)
[30] EDIT button (21)
[31] REPEAT button (17)
[32] S. A. BASS (Signal Adaptive Bass) button and lamp (10)
[33] SOUND MODE button (10)
[34] CANCEL button (9, 17, 22)
DEMO button (8)
[35] RDS operation buttons (13)
- DISPLAY MODE, PTY/EON, and SELECT – / + buttons

Display window

[1] Timer indicators
- ⏲, SLEEP, REC, and DAILY indicators

[2] Tuner operation indicators
- STEREO and MONO indicators

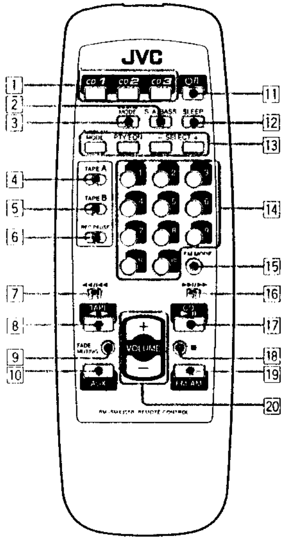
[3] Audio level indicator
SEA (Sound Effect Amplifier) pattern indicator
[4] SOUND MODE indicator
[5] Disc indicators
[6] CD track number indicators
[7] CD play mode indicators
- REPEAT (ALL/1CD/1), PROGRAM, and RANDOM indicators

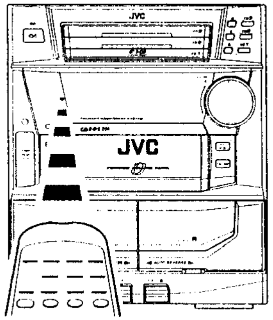
[8] Main display
- Shows the source name, frequency, etc.

[9] RDS operation indicators
- RDS, EON, and TA/NEWS/INFO indicators

[10] Tape operation indicators
- A/B (operating deck), REC, (⇄) (reverse mode), and ◄ ► (tape direction) indicators

Remote Control





When using the remote control, point it at the remote sensor on the front panel.

Remote Control

[1] Disc number buttons (CD 1, CD 2, and CD 3) (15)
Pressing one of these buttons also turns on the unit.
[2] S. A. BASS (Signal Adaptive Bass) button (10)
[3] SOUND MODE button (10)
[4] TAPE A button (18)
[5] TAPE B button (18)
[6] REC PAUSE button (19)
[7] ◄◄ / |◄◄ (fast left/reverse search) button (16 – 18)
[8] TAPE ◄ ► button (18)
Pressing this button also turns on the unit.
[9] FADE MUTING button (10)
[10] AUX button (9)
Pressing this button also turns on the unit.
[11] ⏻/I (standby/on) button (9)
[12] SLEEP button (24)
[13] RDS operation buttons (13)
- DISPLAY MODE, PTY/EON, and SELECT – / + buttons

[14] Number buttons (12, 16)
[15] FM MODE button (12)
[16] ►►| / ►► (forward search/fast right) button (16 – 18)
[17] CD ►/❚❚ button (15)
Pressing this button also turns on the unit.
[18] ■ (stop) button (15, 18)
[19] FM/AM button (12)
Pressing this button also turns on the unit.
[20] VOLUME + / – button (10)

Getting Started

Continued

Unpacking

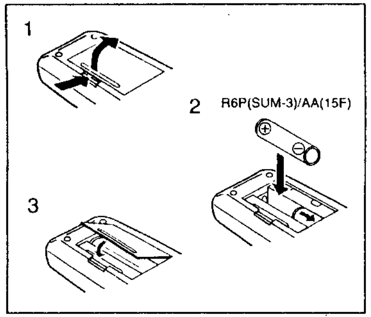
After unpacking, check to be sure that you have all the following items.
The number in the parentheses indicates the quantity of the pieces supplied.

- AM loop antenna (1)
- FM antenna (1)
- Remote control (1)
- Batteries (2)

If any is missing, consult your dealer immediately.

Putting the Batteries into the Remote Control

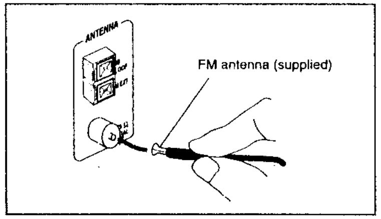
Insert the batteries — R6P(SUM-3)/AA(15F) — into the remote control, by matching the polarity (+ and –) on the batteries with the + and – markings on the battery compartment.
When the remote control can no longer operate the unit, replace both batteries at the same time.


1
2
R6P(SUM-3)/AA(15F)
3

- DO NOT use an old battery together with a new one
- DO NOT use different types of batteries together.
- DO NOT expose batteries to heat or flame.
- DO NOT leave the batteries in the battery compartment when you are not going to use the remote control for an extended period of time Otherwise, it will be damaged from battery leakage.

Connecting Antennas

FM antenna


ANTENNA
FM antenna (supplied)

1 **Attach the FM antenna to the FM 75 Ω COAXIAL terminal.**

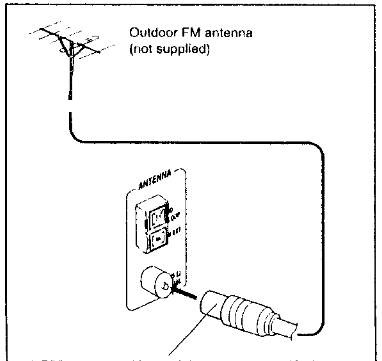
2 **Extend the FM antenna.**

3 **Fasten it up in the position which gives you the best reception.**

About the supplied FM antenna
The FM antenna supplied with this unit can be used as temporary measure. If reception is poor, you can connect an outdoor FM antenna.

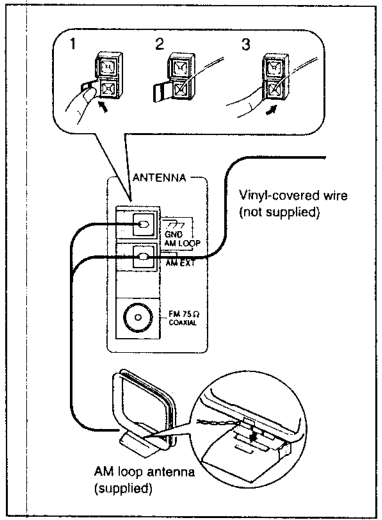
To connect an outdoor FM antenna

Before connecting it, disconnect the supplied FM antenna.


Outdoor FM antenna
(not supplied)
ANTENNA

A 75Ω antenna with coaxial type connector (DIN 45325) should be used.

AM (MW/LW) antenna


1
2
3
ANTENNA
GND
AM LOOP
AM EXT
FM 75Ω COAXIAL
Vinyl-covered wire
(not supplied)
AM loop antenna
(supplied)

1 **Connect the AM loop antenna to the AM LOOP terminals as illustrated.**

2 **Turn the AM loop antenna until you have the best reception.**

To connect an outdoor AM antenna

When reception is poor, connect a single vinyl-covered wire to the AM EXT terminal and extend it horizontally. (The AM loop antenna must remain connected.)

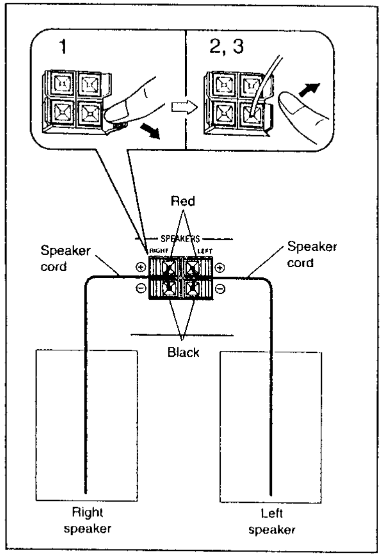
For better reception of both FM and AM (MW/LW)

- Make sure the antenna conductors do not touch any other terminals and connecting cords.
- Keep the antennas away from metallic parts of the unit, connecting cords, and the AC power cord.

Connecting Speakers

You can connect a pair of front speakers, and one subwoofer.

To connect front speakers


1
2, 3
Red
SPEAKERS
RIGHT
LEFT
Speaker cord
Speaker cord
⊕
⊕
⊖
⊖
Black
Right speaker
Left speaker

1 **Press and hold the clamp of the speaker terminal on the rear of the unit.**

2 **Insert the end of the speaker cord into the terminal.**
Match the polarity of the speaker terminals: Red (+) to red (+) and black (–) to black (–).

3 **Release the finger from the clamp.**

IMPORTANT: Use only speakers with the same speaker impedance as indicated by the speaker terminals on the rear of the unit.

Listening to FM and AM (MW/LW) Broadcasts

Tuning in a Station

On the unit ONLY:

1 Press FM/AM.

The unit automatically turns on and tunes in the previously tuned station (either FM or AM – MW/LW). The Powered Rolling Panel automatically opens.

- Each time you press the button, the band alternates between FM and AM (MW/LW).

2 Press and hold TUNING – / + for more than 1 second.

The unit starts searching for stations and stops when a station of sufficient signal strength is tuned in.

If a program is broadcast in stereo, the STEREO indicator lights up.

To stop during searching, press TUNING – / +.

notes **When you press TUNING – / + briefly and repeatedly**

The frequency changes step by step

To change the FM reception mode

When an FM stereo broadcast is hard to receive or noisy, press FM MODE on the remote control so that the MONO indicator lights up on the display. Reception improves.

To restore the stereo effect, press FM MODE again so that the MONO indicator goes off.

In this stereo mode, you can hear stereo sounds when a program is broadcast in stereo.

Presetting Stations

You can preset 30 FM and 15 AM (MW/LW) stations.

In some cases, test frequencies have been already memorized for the tuner since the factory examined the tuner preset function before shipment. This is not a malfunction. You can preset the stations you want into memory by following the presetting method.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Tune in the station you want to preset.

- See "Tuning in a Station" above.

FM 87.50MHz

2 Press SET.

SET

3 Press PRESET – / + to select a preset number.

P- 1

4 Press SET again.

STORED

The tuned station in step 1 is stored in the preset number selected in step 3.

- Storing a new station on a used number erases the previously stored one.

notes **When you unplug the AC power cord or if a power failure occurs**

The preset stations will be erased in a few days. If this happens, preset the stations again.

Tuning in a Preset Station

1 Press FM/AM.

The unit automatically turns on and tunes in the previously tuned station (either FM or AM – MW/LW). The Powered Rolling Panel automatically opens.

- Each time you press the button, the band alternates between FM and AM (MW/LW).

2 Select a preset number.

On the unit:

Press PRESET – / +.

On the remote control:

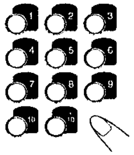
Press the number buttons.

For preset number 5, press 5.

For preset number 15, press +10 then 5.

For preset number 20, press +10, then 10.

For preset number 25, press +10, +10, then 5.



Receiving FM Stations with RDS

RDS allows FM stations to send an additional signal along with their regular program signals. For example, the stations send their station names, as well as information about what type of program they broadcast, such as sports or music, etc.

When tuned to an FM station which provides the RDS service, the RDS indicator lights up on the display.

With the unit, you can receive the following types of RDS signals.

PS (Program Service):
Shows commonly known station names.

PTY (Program Type):
Shows types of broadcast programs.

RT (Radio Text):
Shows text messages the station sends.

EON (Enhanced Other Networks):
Provides the information about the types of the programs sent by other RDS stations.

notes **More about RDS**

- Some FM stations and AM (MW/LW) stations do not provide RDS signals
- RDS services vary among FM RDS stations. For details on RDS services in your area, check with local radio stations.
- RDS may not work correctly if the received station is not transmitting the signals properly or if the signal strength is weak

Changing the RDS Information

You can see RDS information on the display while listening to an FM station.

Press DISPLAY MODE.

- Each time you press the button, the display changes to show the following information:

→ PS (Program Service) → PTY (Program Type) → RT (Radio Text) → Station frequency (or preset channel no.)

notes **If no PS, PTY, or RT signals are sent by a station**

"NO PS," "NO PTY," or "NO RT" appears in the main display.

notes **If the unit takes time to show the RDS information received from a station**

"WAIT PS", "WAIT PTY", or "WAIT RT" may appear on the display.

Searching for Programs by PTY Codes (PTY Search)

One of the advantages of RDS is that you can locate a particular kind of program by specifying the PTY codes.

- For details on the PTY codes, see "Additional Information" on page 25.

To search for a program using the PTY codes

REMEMBER you must preset FM RDS stations to use the EON function. If not yet done, see page 12.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

1 Press PTY/EON until "PTY" and "SELECT" alternately appears on the display.

- Each time you press the button, RDS operation mode changes as follows:

→ PTY SELECT → EON SELECT → Canceled →

2 Press SELECT – / + until the PTY code you want appears on the display.

NEWS

- Each time you press the button, the PTY codes change as follows:

NEWS ⇄ AFFAIRS ⇄ INFO ⇄ SPORT ⇄
EDUCATE ⇄ DRAMA ⇄ CULTURE ⇄
SCIENCE ⇄ VARIED ⇄ POP M ⇄ ROCK M ⇄
M.O.R. M ⇄ LIGHT M ⇄ CLASSICS ⇄
OTHER M ⇄ WEATHER ⇄ FINANCE ⇄
CHILDREN ⇄ SOCIAL A ⇄ RELIGION ⇄
PHONE IN ⇄ TRAVEL ⇄ LEISURE ⇄ JAZZ ⇄
COUNTRY ⇄ NATIONAL ⇄ OLDIES ⇄
FOLK M ⇄ DOCUMENT ⇄ TRAFFIC ⇄
(back to the beginning)

3 Press PTY/EON once again.

While searching, "SEARCH" and the selected PTY code alternate on the display.

The unit searches 30 preset FM stations, stops when it finds the one you have selected ("FOUND" appears), and tunes in that station.

- If no program is found, "NOT" and "FOUND" alternately appears on the display and the unit returns to the last received station.

To stop searching any time during the process

Press PTY/EON while searching.

Switching to a Program Type of Your Choice Temporarily

By receiving EON data sent by FM RDS stations, the EON function allows the unit to switch temporarily to a broadcast program of your choice (TA, NEWS, and INFO) from a different station.
The EON function only works when you are listening to a preset FM RDS stations providing EON data.

- The EON indicator lights while receiving a station with EON data.

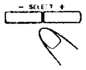
To activate the EON function
REMEMBER you must preset FM RDS stations to use the EON function. If not yet done, see page 12.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.

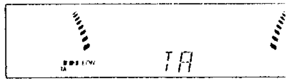
1 Press PTY/EON until "EON" and "SELECT" alternately appear on the display.

- Each time you press the button, RDS operation mode changes as follows:

→ PTY SELECT → EON SELECT
Canceled ←



2 Press SELECT – / + until the EON data type you want appears on the display.
The selected EON data type indicator also flashes.



- Each time you press the button, the EON data types change as follows:

→ TA ←→ NEWS ←→ INFO ←
→ OFF ←
(Canceled)

TA: Traffic announcement
NEWS: News
INFO: Program the purpose of which is to impart advice in the widest sense
OFF: The EON function is canceled. The EON data type indicator (TA, NEWS, INFO) goes off.

3 Press PTY/EON once again.
The EON data type indicator stops flashing and remains lit.
Now, the EON function is activated. See "How the EON function actually works."

How the EON function actually works:

CASE 1

If there is no station broadcasting the program you have selected
The unit continues tuning in the current station.

⬇

When a station starts broadcasting the program you have selected, the unit automatically switches to the station. The indicator of received PTY code starts flashing.

⬇

When the program is over, "EON END" appears in the main display, and the unit goes back to the previously tuned station, but the EON function still remains activated.

CASE 2

If there is a station broadcasting the program you have selected
The unit tunes in the program. The indicator of received PTY code starts flashing.

⬇

When the program is over, "EON END" appears in the main display, and the unit goes back to the previously tuned station, but the EON function still remains activated.

CASE 3

If the FM station you are listening to is broadcasting the program you have selected
The unit continues to receive the station but the indicator of received PTY code starts flashing.

⬇

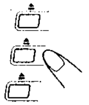
When the program is over, the indicator of received PTY code stops flashing and remains lit, but the EON function still remains activated.

notes **More about the EON function**

- EON data sent from some stations may not be compatible with this unit. In this case, the EON function may not work correctly.
- While listening to a program tuned in by the EON function, the station does not change even if another network station starts broadcasting a program of the same EON data.
- The EON function is canceled when you change the source to CD, TAPE, or AUX, while it is temporarily canceled when you change the source to AM.

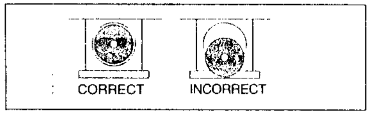
Playing Back CDs

Loading CDs

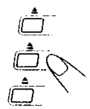


1 Press ≜ for the disc tray (CD 1 to 3) you want to load a CD onto.
The unit automatically turns on and the disc tray comes out. The Powered Rolling Panel also opens automatically.

2 Place a disc correctly on the circle of the disc tray, with its label side up.



- When using a CD single (8 cm), place it on the inner circle of the disc tray.

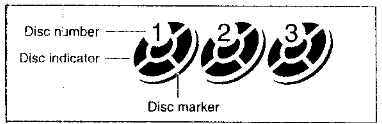


3 Press the same ≜ you have pressed in step 1.
The disc tray closes, and the corresponding disc number indicator (CD 1 to CD 3) lights up on the display.

4 Repeat steps 1 to 3 to place other CDs.

notes **When loading more than one CD continuously**
When you press ≜ for the next tray you want to place another CD onto, the first disc tray automatically closes and then the next tray comes out.

notes **About the disc indicators**
Each disc indicator corresponds to the disc tray of the same number

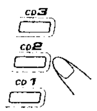


- The disc marker lights up for the disc number you have selected.
- The disc indicator flashes while the corresponding CD is being played.
- The disc indicator goes off when the unit has detected that there is no CD on the corresponding disc tray.

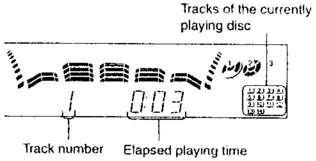
Playing Back the Entire Discs — Continuous Play

You can play CDs continuously.

1 Load CDs.



2 Press one of the disc number buttons (CD 1, CD 2, and CD 3) for the disc you want to play.
CD play starts from the first track of the selected disc.



- Pressing CD ►/❚❚ instead of the disc number buttons starts playing back if a CD is on the trays.

To stop during play, press ■.

To remove the disc, press ≜ for the corresponding disc tray.

notes **CD playback sequence**
When 3 CDs are loaded on the disc trays, they are played in one of the following sequences

- When CD 1 is pressed : CD 1 ⇨ CD 2 ⇨ CD 3 (then stops)
- When CD 2 is pressed : CD 2 ⇨ CD 3 ⇨ CD 1 (then stops)
- When CD 3 is pressed : CD 3 ⇨ CD 1 ⇨ CD 2 (then stops)

* When only 2 CDs are loaded, they are played in the same order, but the disc tray without a CD is skipped.

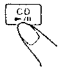
Basic CD Operations

While playing a CD, you can do the following operations.

To exchange CDs during playback of another

Press ≜ corresponding to a CD, not playing or selected currently, to eject and exchange the CD
If you exchange CDs during play, the current play will not stop until all CDs you have exchanged are played.

To stop play for a moment

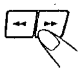


Press CD ►/❚❚.
While pausing, the elapsed playing time flashes on the display.

To resume play, press CD ►/❚❚ again.

Continued

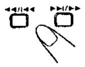
To locate a particular point in a track



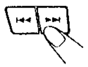
During play, press and hold ◀◀ or ▶▶.

- ◀◀: Fast reverses the disc.
- ▶▶: Fast forwards the disc.

When using the remote control, press and hold ◀◀ / |◀◀ or ▶▶| / ▶▶.



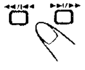
To go to another track



Press |◀◀ or ▶▶| repeatedly before or during playback.

- |◀◀: Goes back to the beginning of the current or previous tracks.
- ▶▶|: Skips to the beginning of the next or succeeding tracks.

When using the remote control, press ◀◀ / |◀◀ or ▶▶| / ▶▶ before playing.



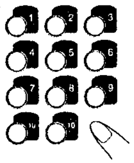
notes **If you press and hold |◀◀ / ▶▶| (or ◀◀ / |◀◀ or ▶▶| / ▶▶ before playing)**

You can change the tracks continuously.

To go to another track directly using the number buttons

Pressing the number button(s) before or during play allows you to start playing the track number you want.

Ex.: For track number 5, press 5.
For track number 15, press +10, then 5.
For track number 20, press +10, then 10.
For track number 32, press +10, +10, +10, then 2.



Programming the Playing Order of the Tracks — Program Play

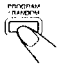
You can arrange the order in which the tracks play before you start playing. You can program up to 32 tracks.

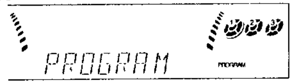
- To use Repeat play (see page 17) for Program play, press REPEAT after starting Program play.

1 **Load CDs.**

- If the current playing source is not the CD player, press CD ▶/II, then ■ before going to the next step.

2 **Press PROGRAM/RANDOM repeatedly until "PROGRAM" appears on the display.**



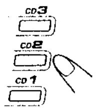


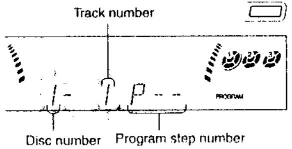
- If a program has been stored in memory, the program is called up.

- Each time you press the button, CD play mode changes as follows:

→ Program Play → Random Play
Continuous Play ←

3 **Press one of the disc number buttons (CD 1, CD 2, and CD 3) to select the disc number you want to play.**

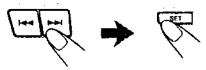




4 **Select a track from the CD selected in the above step.**

On the unit:

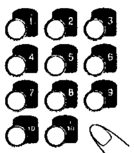
Press |◀◀ or ▶▶| to select the track number, then press SET.

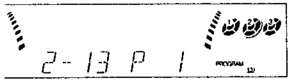


On the remote control:

Press the number buttons.

- For how to use the number buttons, see "To go to another track directly using the number buttons" described to the left.





5 **Program other tracks you want.**

- To program tracks from the same disc, repeat step 4.
- To program tracks from a different disc, repeat steps 3 and 4.

6 **Press CD ▶/II.**

The tracks are played in the order you have programed.

To stop during play, press ■.

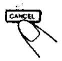
To exit from Program play mode, press PROGRAM/RANDOM repeatedly again before or after play so that the unit enters another play mode. (The program you have made is stored in memory until you turn off the unit or erase the program.)

To check the program contents

Before playing, you can check the program contents by pressing ◀◀ / |◀◀ or ▶▶| / ▶▶ on the remote control.

- ▶▶| / ▶▶: Shows the programed tracks in the programed order.
- ◀◀ / |◀◀: Shows them in the reverse order.

To modify the program



Before play, you can erase the programed tracks shown on the display by pressing CANCEL.

- Each time you press the button, the programed track shown on the display is erased from the program.

To add tracks in the program before play, simply select the track numbers you want to add by following step 4 of the programming procedure on page 16.

To erase the entire program before or after play, press ■. "PROGRAM" appears on the display.

- Ejecting a CD will also erase the track numbers programed from the ejected CD.

notes **If you try to program a 33rd step**

"FULL" will appear on the display.

notes **If your entry is ignored**

You have tried to program a track from an empty tray, or a track number that does not exist on the CD (for example, selecting track 14 on a CD that only has 12 tracks). Such entries are ignored.

Playing at Random — Random Play

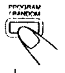
The tracks of all loaded CDs will play at random.

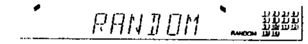
- To use Repeat play for Random play, press REPEAT after starting Random play.

1 **Prepare CDs.**

- If the current playing source is not the CD player, press CD ▶/II, then ■ before going to the next step.

2 **Press PROGRAM/RANDOM repeatedly until "RANDOM" appears on the display.**

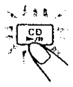




- Each time you press the button, CD play mode changes as follows:

→ Program Play → Random Play
Continuous Play ←

3 **Press CD ▶/II.**



The tracks are played at random.
Random play ends when all the tracks are played once.

To stop during play, press ■.

- Random play also stops when one of the disc trays is opened.

To exit from Random play mode, press PROGRAM/RANDOM repeatedly again before or after play so that the unit enters another play mode.

notes **Even if you press |◀◀ (or ◀◀ / |◀◀ on the remote control)**

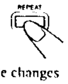
You cannot go back to the previous tracks during Random play.

- If you press ▶▶| (or ▶▶| / ▶▶ on the remote control), you can go to next random tracks.

Repeating Tracks or CDs — Repeat Play

You can have all the CDs, the program or the individual track currently playing repeat as many times as you like.

To repeat play, press REPEAT during or before playing. To use Repeat play for Program play and Random play, press the button after starting playback.



- Each time you press the button, Repeat play mode changes as follows, and the following indicator lights up on the display:

→ REPEAT ALL → REPEAT 1CD
Canceled ← REPEAT 1 ←
(Continuous play)

REPEAT ALL: Repeats all the tracks on all the CDs (continuously or at random), or all the tracks in the program.
REPEAT 1CD*: Repeats all the tracks on one CD.
REPEAT 1: Repeats one track on one CD.

* REPEAT 1CD is not used for Program play and Random play.

To cancel Repeat play, press REPEAT repeatedly until the REPEAT indicator (REPEAT ALL, REPEAT 1CD, or REPEAT 1) goes off from the display.

- Repeat play is also canceled when you select Program play or Random play.

Prohibiting Disc Ejection — Tray Lock

You can prohibit CD ejection from the unit and can lock discs.

- This operation is possible only using the buttons on the unit.

To prohibit disc ejection, press ⏏ for any disc tray while holding ■. (If there is any disc tray opened, close it first.) "LOCKED" appears for a while, and the loaded CDs are locked.

To cancel the prohibition and unlock the CDs, press ⏏ for any disc tray while holding ■.
"UNLOCKED" appears for a while, and the loaded CDs are unlocked.

notes **If you try to eject CDs**

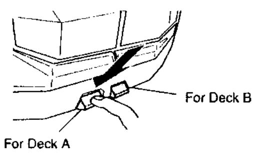
"LOCKED" appears to inform you that the Tray Lock is in use.

Playing Back Tapes

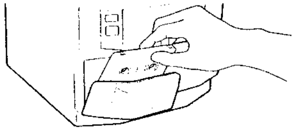
You can play back type I, type II, and type IV tapes without changing any settings.

Playing Back a Tape

1 Press EJECT (⏏) for the deck you want to use.



2 Put a cassette in, with the exposed part of the tape down.



3 Close the cassette holder gently.

If you put cassettes in both decks A and B, the last deck you have put a cassette into is selected.

To operate the other deck, press DECK A/B (or TAPE A or TAPE B on the remote control).

4 Press TAPE ◄ ►.

The tape play starts and the tape direction indicator (◄ ►) starts flashing slowly to indicate the tape running direction.

- Each time you press the button, the tape direction changes.
  - ► : plays the front side.
  - ◄ : plays the reverse side.

When the tape plays to the end, the deck automatically stops if the Reverse Mode is not on. (See "To play both sides repeatedly — Reverse Mode.")

To stop during play, press ■.

To operate the other deck, press DECK A/B (or TAPE A or TAPE B on the remote control), then TAPE ◄ ►.

To fast wind to the left or to the right, press ◄◄ / ►► (◄◄ / |◄◄ or ►►| / ►► on the remote control) while the tape is not running.
The tape direction indicator (◄ ►) starts flashing quickly on the display.

To remove the cassette, press ⏏ EJECT for deck A or EJECT ⏏ for deck B.

To play both sides repeatedly — Reverse Mode

Reverse Mode works for both decks at the same time.
When it is in use, the tape automatically reverses at the end of a side and the unit starts playing the other side of the tape, and repeats the same process.

REVERSE MODE

To use Reverse Mode, press REVERSE MODE so that the Reverse Mode indicator on the display lights up like — (⇄)

To cancel Reverse Mode, press the button again so that the Reverse Mode indicator on the display lights up like — ⇄

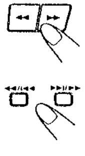
When Reverse Mode is on with cassettes in both decks A and B

After the reverse (◄) side of the tape finishes playing, the tape in the other deck starts playing.

Locating the Beginning of a Song — Music Scan

You can use Music Scan to locate the beginning of a song. Music Scan searches for blank portions that usually separate recorded songs, then plays the next song.

To find the beginning of the current song



During play, press ◄◄ / ►► (◄◄ / |◄◄ or ►►| / ►► on the remote control) **in the opposite direction** to the tape play.
The tape direction indicator of the opposite direction to the tape play starts flashing slowly and quickly alternately.

Searching stops automatically at the beginning of the current song, and the current song starts automatically.

To find the beginning of the next song

During play, press ◄◄ / ►► (◄◄ / |◄◄ or ►►| / ►► on the remote control) **in the same direction** as the tape play.
The tape direction indicator of the same direction as the tape play starts flashing slowly and quickly alternately.

Searching stops automatically at the beginning of the next song, and the next song starts automatically.

Music Scan works by detecting a 4-second long blank between each song, so it will not work well in the following cases

- No blank at the beginning of a song.
- Noise (often caused by much use or poor quality dubbing) which fills the blank.
- Long, very soft passages or pauses in a song.

STOP The use of the C-120 or thinner tape is not recommended, since characteristic deterioration may occur and this tape easily jams in the pinch-rollers and the capstans.

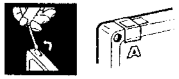
Recording

IMPORTANT:

- **It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.**
- The recording level is automatically set correctly, so it is not affected by the VOLUME control. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- While recording, you can hear sound modes and/or the Signal Adaptive Bass effect through the speakers or headphones. However, the sound is recorded without these effects (see page 10).
- If recordings you have made have excessive noise or static, the unit may be too close to a TV. Increase the distance between the TV and the unit.
- You can use type I and II tapes for recording.

To protect your recording

Cassettes have two small tabs on the back to protect unexpected erasure or re-recording.
To protect your recording, remove these tabs.
To re-record on a protected tape, cover the holes with adhesive tape.
When using type II tape, be careful not to cover the holes used to detect the tape type.

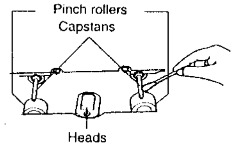


To keep the best recording and playback sound quality

If the heads, capstans, and pinch rollers of the cassette decks become dirty, the following will occur:

- Impaired sound quality
- Discontinuous sound
- Fading
- Incomplete erasure
- Difficulty in recording

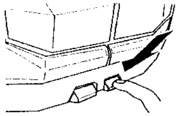
To clean the heads, capstans, and pinch rollers
Use a cotton swab moistened with alcohol.



To demagnetize the heads.
Turn off the unit, and use a head demagnetizer (available at electronics and record shops).

Recording Tapes on Deck B

1 Press EJECT ⏏ for the deck B.



2 Put in a recordable cassette, with the exposed part of the tape down.

3 Close the cassette holder gently.

4 Check the tape direction of deck B.

- If the tape direction is not correct, press TAPE ◄ ► twice then ■ to change the tape direction.

5 Start playing the source — FM, AM*, CD player, deck A, or auxiliary equipment connected to AUX jacks.

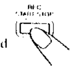
- When the source is CD, you can also use CD Direct Recording (see page 20) and Auto Edit Recording (see page 21).
- When the source is deck A, you can also use the dubbing method. (See "Dubbing Tapes" on page 20.)

* See "To record an AM (MW/LW) station - Beat Cut" on page 20.

6 Start recording.

On the unit:

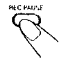
Press REC START/STOP.



The REC indicator lights up on the display and recording starts.

On the remote control:

1) Press REC PAUSE.



The REC indicator starts flashing on the display.

2) Press TAPE ◄ ►.

The REC indicator stops flashing and remains lit, and recording starts.

To stop during recording, press REC START/STOP again (or ■ on the remote control).

To stop recording temporarily (except when the playback source is deck A), press REC PAUSE on the remote control.
To resume recording, press TAPE ◄ ►.

To remove the cassette, press EJECT ≜ for deck B.

To record on both sides — Reverse Mode

REVERSE MODE

Press REVERSE MODE so that the Reverse Mode indicator lights up as — (⇄)

- When using the Reverse Mode for recording, start recording in the forward (►) direction first.
- Otherwise, recording will stop when recording is done only on one side (reverse) of the tape.

To cancel Reverse Mode, press the button again so that the Reverse Mode indicator lights up as — ⇄

To record an AM (MW/LW) station — Beat Cut

While recording an AM (MW/LW) broadcast, beats may be heard (which are never heard when listening to the broadcast without recording it).

PROGRAM RANDOM

If this occurs, press PROGRAM/RANDOM repeatedly, while recording, until the beats are reduced.

- Each time you press the button, the display changes to show the following:

→CUT1 → CUT2 → CUT3 → CUT4 ┐

Dubbing Tapes

It is preferable that the tape type (type I or II) you record from be the same as the tape type you record onto when dubbing tapes.

1 Press TAPE ◄ ►, then ■.

2 Put the source cassette in deck A, and a recordable cassette into deck B.
- Put the cassettes in both decks so that the tapes will run in the forward (►) direction.

3 Press DUBBING.
Dubbing starts.

To stop during dubbing, press ■.

To remove the cassette, press ≜ EJECT for deck A and EJECT ≜ for deck B.

To record on both sides — Reverse Mode

Press REVERSE MODE so that the Reverse Mode indicator lights up as — (⇄)

To cancel Reverse Mode, press the button again so that the Reverse Mode indicator lights up as — ⇄

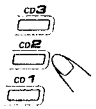
Continued

CD Direct Recording

Everything on the CD goes onto the tape in the order it is on the CD, or according to the order you have made for Program play.

1 Put a recordable cassette into deck B.

2 Place a disc correctly on the circle of the disc tray, with its label side up.



3 Press one of the disc number buttons (CD 1 to CD 3) to select the disc, then ■.

4 Press CD REC START.
"CD REC" appears, and the REC indicator lights up on the display.
Deck B starts recording and the CD player starts playing.
When the recording is done, "CD REC FINISHED" appears on the display, and the CD player and deck B stop.

To stop during CD Direct Recording, press ■.

To remove the cassette, press EJECT ≜ for deck B.

To record on both sides — Reverse Mode

Press REVERSE MODE so that the Reverse Mode indicator lights up as — (⇄)

- When using the Reverse Mode for CD Direct Recording, start recording in the forward (►) direction first. When the tape reaches its end while recording a song in the forward direction (►), the last song will be recorded at the beginning of the reverse side (◄).

  If you start recording on the reverse side (◄), recording will stop when recording is done only on one side (reverse) of the tape.

To cancel Reverse Mode, press the button again so that the Reverse Mode indicator lights up as — ⇄

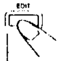
Auto Edit Recording

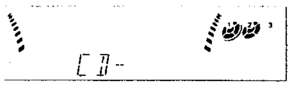
By using Auto Edit Recording, you can record the CD tracks to fit the tape. Auto Edit Recording makes a program by selecting the CD tracks in numerical order. However, to prevent the end of the last track on the front side from being cut off, the last track is selected so as to fit on the remaining tape length.

On the unit ONLY:

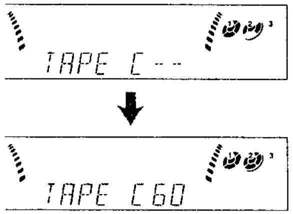
1 Place a disc correctly on the circle of the disc tray, with its label side up.
- If the current playing source is not the CD player, press CD ►/II, then ■ before going to the next step.

2 Press EDIT.





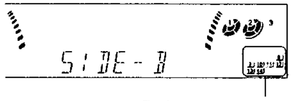
3 Press the disc number button (CD 1 to CD 3) for the disc you want to record from.



The optimum tape length for the disc appears.

To change the tape length manually
If the tape length selected is not satisfactory, you can change the tape length by pressing I◄◄ or ►►I.
You can select the tape length among the following — 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, and 90.

4 Press SET.



Tracks to be recorded on the reverse side (SIDE-B) appear.

- Each time you press the button, the tracks to be recorded on the front side (SIDE-A) and on the reverse side (SIDE-B) alternate.

5 Put a recordable cassette of appropriate length into deck B.

6 Press REVERSE MODE so that the Reverse Mode indicator lights up as (⇄).
- Without turning on the Reverse Mode ((⇄)), recording will stop when the front side of the tape is recorded.

7 Press CD REC START.
The REC indicator lights up on the display.
Deck B starts recording then, about 10 second later, the CD player starts playing.
When the recording is done, "CD REC FINISHED" appears on the display, and the CD player and deck B stop.
- If a tape has not been rewound, deck B will rewind the tape before it starts recording.
- A 10-second blank portion is automatically created at the beginning of each side of the tape.

To stop during Auto Edit Recording
- Press ■ so that a 4-second blank portion is created on the recorded tape. (Remember a 4-second blank is important when using Music Scan – see page 18.)

OR

- Press REC START/STOP. No 4-second blank portion is created on the recorded tape.

To cancel Auto Edit Recording
- Press PROGRAM/RANDOM before or after play. (The unit enters Program, Random, or Continuous Play mode.)

OR

- Press ≜ for the disc you have selected.

To remove the cassette, press EJECT ≜ for deck B.

Using the Timers

Continued

There are three timers available — Recording Timer, Daily Timer, and Sleep Timer.

Before using the timers, you need to set the clock built in the unit. (See page 9.)

Using Daily Timer

With Daily Timer, you can wake to your favorite music or radio program.

How Daily Timer actually works

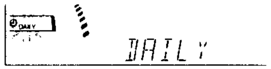
The unit automatically turns on, set the volume level to the preset level, and starts playing the specified source when the on-time comes (the ④ indicator flashes just before the on-time, and continues flashing while the timer is operating). Then, when the off-time comes ("OFF" flashes just before the off-time), the unit automatically turns off (stands by).
The timer setting remains in memory until you change it.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.
- If you have made a mistake while setting timer, press CANCEL. (However, this does not always work. If CANCEL does not work, press TIMER/CLOCK repeatedly and start from step 1 again.)

On the unit ONLY:

1 Press TIMER/CLOCK until "DAILY" appears on the display.

TIMER CLOCK



The DAILY indicator also starts flashing on the display.

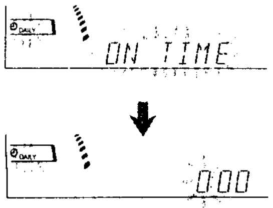
- Each time you press the button, the timer setting modes change as follows:

→ DAILY → ON TIME → REC → ON TIME → Clock setting (See page 9) → Canceled → (back to DAILY)

2 Press TIMER/CLOCK again.

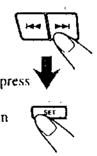
"ON TIME" appears for 2 seconds, then the unit enters on-time setting mode.

TIMER CLOCK



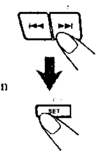
3 Set the on-time you want the unit to turn on.

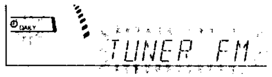
1) Press ⏮ or ⏭ to set the hour, then press SET.
2) Press ⏮ or ⏭ to set the minute, then press SET.
"OFF TIME" appears for 2 seconds, then the unit enters off-time setting mode.



4 Set the off-time you want the unit to turn off (on standby).

1) Press ⏮ or ⏭ to set the hour, then press SET.
2) Press ⏮ or ⏭ to set the minute, then press SET.
The unit enters source selecting mode.

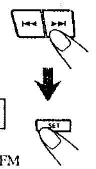




5 Press ⏮ or ⏭ to select the source to play, then press SET.

- Each time you press ⏮ or ⏭, the source changes as follows:

→ TUNER FM ↔ TUNER AM ↔ – CD – – – ↔ TAPE ↔ AUX ↔ (back to TUNER FM)



TUNER FM: tunes into a specified preset FM station. → go to step 6.

TUNER AM: tunes into a specified preset AM (MW/LW) station. → go to step 6.

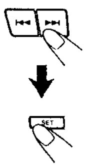
– CD – – –: plays a disc from a specified track of a specified disc. → go to step 6.
- Make sure there is a CD on the selected disc number tray.

TAPE: plays a tape in deck A or B. → go to step 7.
- Make sure that a tape is in the deck whose deck indicator (A or B) is lit on the display.
- Make sure that the tape direction is correct.

AUX: plays an external source. → go to step 7.
- To use this setting, the external component has to be equipped with the timer function.

6 When selecting "– CD – – –"

1) Press ⏮ or ⏭ to select the disc number, then press SET.
2) Press ⏮ or ⏭ to set the track number, then press SET.
The unit enters volume setting mode.

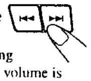


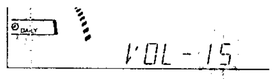
When selecting "TUNER FM" or "TUNER AM"

Press ⏮ or ⏭ to select the preset station number, then press SET.
The unit enters volume setting mode.

7 Press ⏮ or ⏭ to set the volume level.

- You can select the volume level from among four levels. If you select " VOL – – –," the volume is set to the last level when the unit has been turned off.

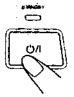




8 Press SET to complete the Daily Timer setting.

The DAILY indicator stops flashing and remains lit. The settings you have done are shown on the display in sequence.

9 Press ⏻/I to turn off the unit (on standby) if you have set the Daily Timer with the unit turned on.



To turn on or off Daily Timer after its setting is done

1 **Press TIMER/CLOCK repeatedly until "DAILY" appears on the display.**

2 **To turn off the Daily Timer, press CANCEL.**
The DAILY indicator goes off from the display.
The Daily Timer is canceled, but the setting for the Daily Timer remains in memory.

To turn on the Daily Timer, press SET.
The DAILY indicator lights up on the display.
The settings you have done are shown on the display in sequence for your confirmation.

TIMER CLOCK
CANCEL
SET

notes **If the unit is turned on when the timer-on time comes** Daily Timer does not work.

Using Recording Timer

With Recording Timer, you can make a tape of a radio broadcast automatically.

How Recording Timer actually works

The unit automatically turns on, tunes into the specified station, sets the volume level to "0," and starts recording when the on-time comes (the ④ indicator flashes just before the on-time, and continues flashing while the timer is operating). Then, when the off-time comes ("OFF" appears just before the off-time), the unit automatically turns off (stands by).
The timer setting remains in memory until you change it.

- There is a time limit in doing the following steps. If the setting is canceled before you finish, start from step 1 again.
- If you have made a mistake while setting the timer, press CANCEL. (However, this does not always work. If CANCEL does not work, press TIMER/CLOCK repeatedly and start from step 1 again.)

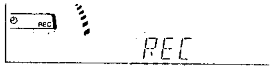
On the unit ONLY:

1 Put a recordable cassette into deck B.

2 Press TIMER/CLOCK until "REC" appears on the display.

The REC indicator also starts flashing on the display.

TIMER CLOCK



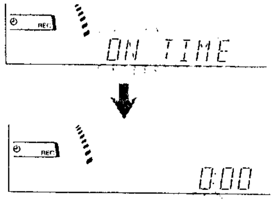
- Each time you press the button, the timer setting modes change as follows:

→ DAILY → ON TIME → REC → ON TIME → Clock setting (See page 9) → Canceled → (back to DAILY)

3 Press TIMER/CLOCK again.

"ON TIME" appears for 2 seconds, then the unit enters on-time setting mode.

TIMER CLOCK

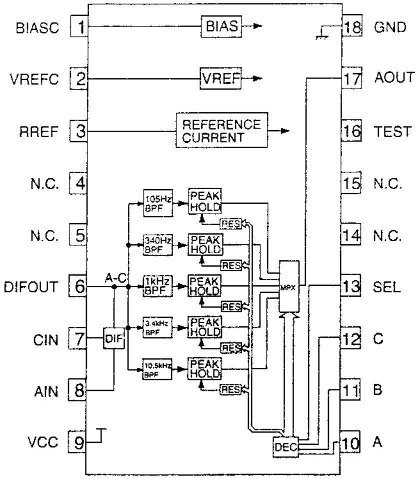


<<MEMO>>

Description of major ICs

■ BA3835S (IC542):SPI BPF

1.Block Diagrams

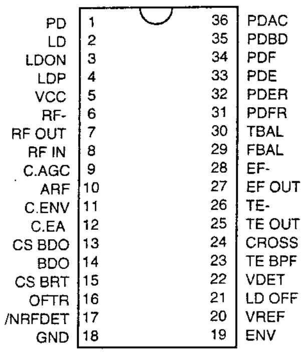

BIASC
1
BIAS
VREFC
2
VREF
RREF
3
REFERENCE CURRENT
N.C.
4
N.C.
5
DIFOUT
6
A-C
CIN
7
DIF
AIN
8
VCC
9
105Hz BPF
340Hz BPF
1kHz BPF
3.4kHz BPF
10.5kHz BPF
PEAK HOLD
PEAK HOLD
PEAK HOLD
PEAK HOLD
PEAK HOLD
RES
RES
RES
RES
RES
MPX
DEC
18
GND
17
AOUT
16
TEST
15
N.C.
14
N.C.
13
SEL
12
C
11
B
10
A

2.Pin Function

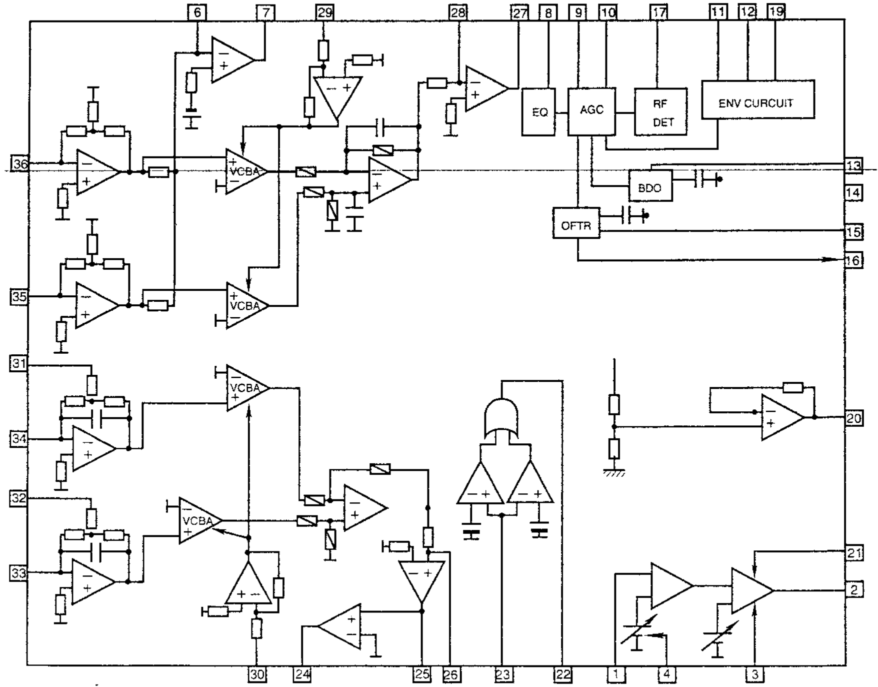
No.	Symbol	I/O	Function
1	BIASC	-	Decoupling condenser connection terminal.
2	VREFC	-	Decoupling condenser connection terminal.
3	RREF	-	Reference resistance connection terminal.
4	NC	-	Non connect.
5	NC	-	Connected to GND of audio system through a condenser.
6	DIF OUT	-	Non connect.
7	CIN	-	Connected to GND of audio system through a condenser.
8	AIN	I	Inputs the audio signal through a condenser.
9	VCC	-	Power supply terminal.
10	SPI-A	O	Output selection control terminal.
11	SPI-B	O	Output selection control terminal.
12	SPI-C	O	Output selection control terminal.
13	SPICSB	O	Output selection control terminal.
14	NC	-	Non connect.
15	NC	-	Non connect.
16	TEST	-	Connected to GND upon normal use.
17	AOUT	O	Multi-plexor output terminal.
18	GND	-	Connect to GND.

■ AN8806SB (IC601) : RF&Servo AMP

1.Terminal Layout


PD 1
LD 2
LDON 3
LDP 4
VCC 5
RF- 6
RF OUT 7
RF IN 8
C.AGC 9
ARF 10
C.ENV 11
C.EA 12
CS BDO 13
BDO 14
CS BRT 15
OFTR 16
/NRFDET 17
GND 18
36 PDAC
35 PDBD
34 PDF
33 PDE
32 PDER
31 PDFR
30 TBAL
29 FBAL
28 EF-
27 EF OUT
26 TE-
25 TE OUT
24 CROSS
23 TE BPF
22 VDET
21 LD OFF
20 VREF
19 ENV

2.Block Diagram

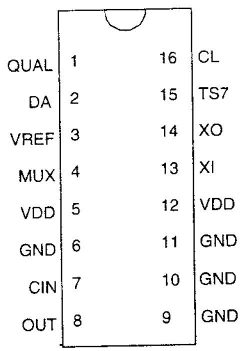

6
7
29
28
27
8
9
10
17
11
12
19
EQ
AGC
RF DET
ENV CURCUIT
BDO
OFTR
VCBA
VCBA
VCBA
VCBA
36
35
31
34
32
33
13
14
15
16
20
21
2
30
24
25
26
23
22
1
4
3

3. Functions

Pin No.	Symbol	I/O	Functions and operations
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connect to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RFamp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	I/O	F I-V amp gain control
32	PDER	I/O	E I-V amp gain control
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

■ BU1923(IC4) : RDS Detector

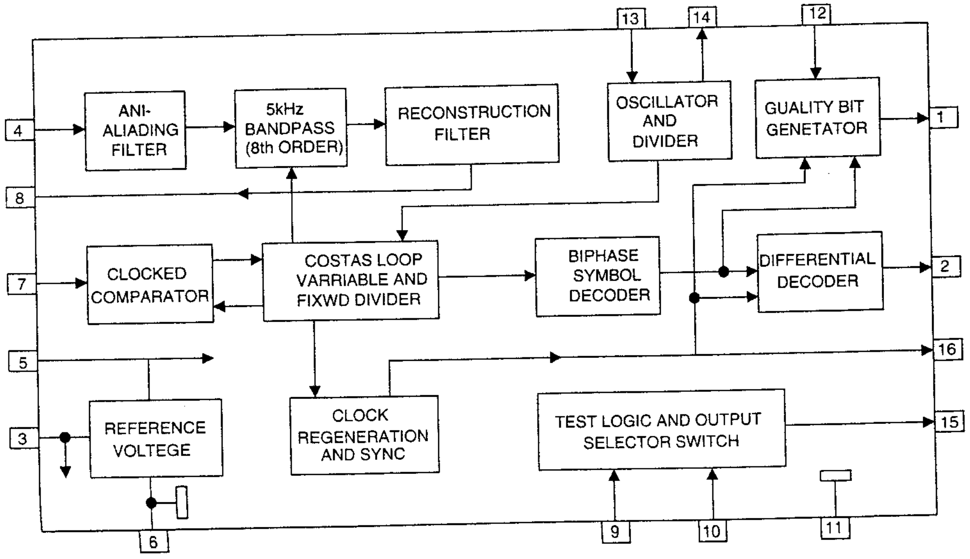
1.Terminal Layout


QUAL 1
DA 2
VREF 3
MUX 4
VDD 5
GND 6
CIN 7
OUT 8
9 GND
10 GND
11 GND
12 VDD
13 XI
14 XO
15 TS7
16 CL

2.Pin Functiont

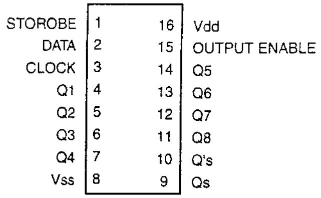
Pin No.	Symbol	I/O	Function
1	QUAL	--	Non connection
2	DA	O	RDS data output
3	VREF	O	Reference voltage output
4	MUX	I	Multiplex signal input
5	VDD	--	+5Vsupply voltage for analog
6	GND	--	Ground for analog part(0V)
7	CIN	I	Subcarrier outputof reconstruction filter
8	OUT	O	Ground for digital part(0V)
9	GND	--	Ground for digital part(0V)
10	GND	--	Ground for digital part(0V)
11	GND	--	Ground for digital part(0V)
12	VDD	--	+5Vsupply voltage for digital part
13	XI	I	Oscilator input
14	XO	O	Oscilator output
15	TS7	--	Non connection
16	CL	O	RDS clock output

3.Block Diagram

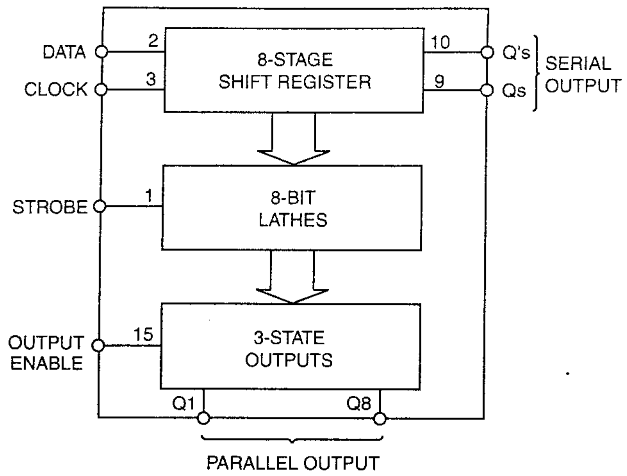

ANI-ALIADING FILTER
5kHz BANDPASS (8th ORDER)
RECONSTRUCTION FILTER
OSCILLATOR AND DIVIDER
GUALITY BIT GENETATOR
CLOCKED COMPARATOR
COSTAS LOOP VARRIABLE AND FIXWD DIVIDER
BIPHASE SYMBOL DECODER
DIFFERENTIAL DECODER
REFERENCE VOLTEGE
CLOCK REGENERATION AND SYNC
TEST LOGIC AND OUTPUT SELECTOR SWITCH
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

■ BU4094BCF(IC304,IC303):SERIAL TO PARALLEL PROT EXTENSION

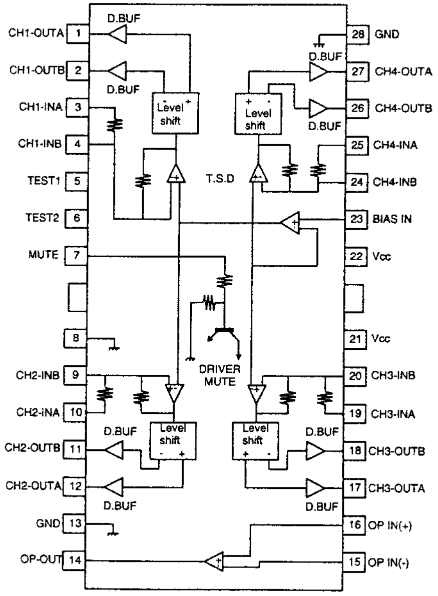
1.Terminal Layout


STOROBE 1
DATA 2
CLOCK 3
Q1 4
Q2 5
Q3 6
Q4 7
Vss 8
16 Vdd
15 OUTPUT ENABLE
14 Q5
13 Q6
12 Q7
11 Q8
10 Q's
9 Qs

2.Block Diagram


DATA
CLOCK
STROBE
OUTPUT ENABLE
2
3
1
15
10
9
8-STAGE SHIFT REGISTER
8-BIT LATHES
3-STATE OUTPUTS
Q's
Qs
SERIAL OUTPUT
Q1
Q8
PARALLEL OUTPUT

■ BA6897FP(IC801):4channel driver

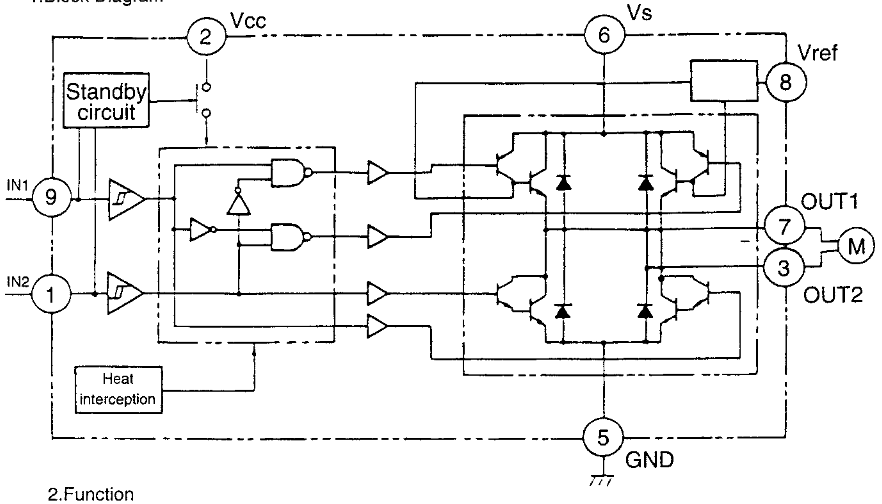

CH1-OUTA 1
CH1-OUTB 2
CH1-INA 3
CH1-INB 4
TEST1 5
TEST2 6
MUTE 7
8
CH2-INB 9
CH2-INA 10
CH2-OUTB 11
CH2-OUTA 12
GND 13
OP-OUT 14
15 OP IN(-)
16 OP IN(+)
17 CH3-OUTA
18 CH3-OUTB
19 CH3-INA
20 CH3-INB
21 Vcc
22 Vcc
23 BIAS IN
24 CH4-INB
25 CH4-INA
26 CH4-OUTB
27 CH4-OUTA
28 GND
D.BUF
Level shift
T.S.D
DRIVER MUTE

■ MN101C23DBP3 (IC810) : System controller

Pin No.	Symbol	I/O	Descriptions
1	KCMND	O	VC3 Serial data output
2	MSTAT	I	VC3 Status data input
3	KCLK	I	VC3 Serial clock input
4	DATAOUT	O	SLC/TUNER data output
5	DATAIN	I	SLC/TUNER data input
6	CK	O	SLC/TUNER clock signal output
7	BEAT	O	BEAT Cut signal output of TUNER
8	VDD	-	Power supply +5V
9,10	OSC2,1	I/O	Oscillation terminal (8MHz)
11	VSS	-	Connect to GND
12,13	XI,XO	I/O	Sub clock (32.768kHz)
14	MMOD	-	Connect to GND
15	VREF-	-	Connect to GND
16~19	KEY1~4	I	Key matrix input 1~4
20	SLCKEY1	I	Tape A playback detect switch
21	SLCKEY2	I	Tape B playback detect switch
22	SLCKEY3	I	Tape B playback/recording detect switch
23	SPIDTI	I	SPI data input
24	VREF+	-	Power supply +5V
25	MRDY	I	VC3 ready input
26	RESET	I	Reset signal input
27	PANEL OP	I	Moving panel open detection signal input
28	PANEL CL	I	Moving panel close detection signal input
29	LOAD DET	I	Overload detect signal input
30	MSI	I	MS Detector signal input
31	PROSACK	O	Clock signal output to IC406
32	PROSADA	I	Data input from IC406
33	REMIN	I	Remote control signal input
34	PHOTOA	I	Tape A mechanism running detection signal input
35	PHOTOB	I	Tape B mechanism running detection signal input
36	INH	I	Inhibit signal input
37	RDSCLK	I	Clock signal input from IC4
38	PRT	I	Protector input
39	RDS DATA	I	RDS data input from IC4
40	SPICSB	O	SPI Chip select signal output
41	OSDCLK	-	Not used
42~44	SPIC~A	O	SPI-C~A Data output to IC542
45,46	VOL+/-	I	Volume rotary encoder input (+/-)
47	MPX	I	Stereo detect
48	FVOLDA	O	Front volume data output
49	SLCCE	O	SLC Chip enable signal output to IC303.IC304
50	RVOLDA	O	Rear volume data output
51~59	G9~1	O	FL grid control signal output
60~89	P1~30	O	FL segment control signal output
90	SABCE	O	SA BASS Chip enable signal output
91	PROCE	O	ProLogic Chip enable signal output
92	DSPCE	O	DSP Chip enable signal output
93	EXTCE	O	EXT Chip enable signal output
94	VOLCK	O	Clock signal output to IC401
95	SMUTE	O	System mute control signal output
96	OSDCE	-	Not used
97	POUT	O	Power ON/OFF
98	TUCE	O	TUNER Chip enable signal output
99	VC3RESET	O	VC3 Reset output
100	VPP	-	Power supply

■ TA8409S (IC851.IC852.IC853) : Motor Driver

1.Block Diagram

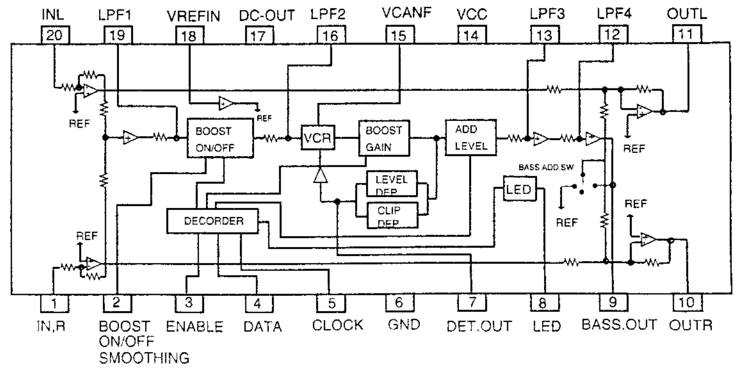

2
Vcc
6
Vs
8
Vref
Standby circuit
IN1
9
IN2
1
7
OUT1
3
OUT2
M
Heat interception
5
GND

2.Function

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	MOTOR
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

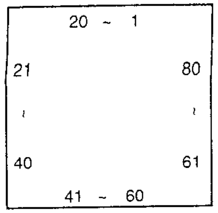
■ LA2650 (IC406) : SA BASS

1.Terminal Layout/Block diagram

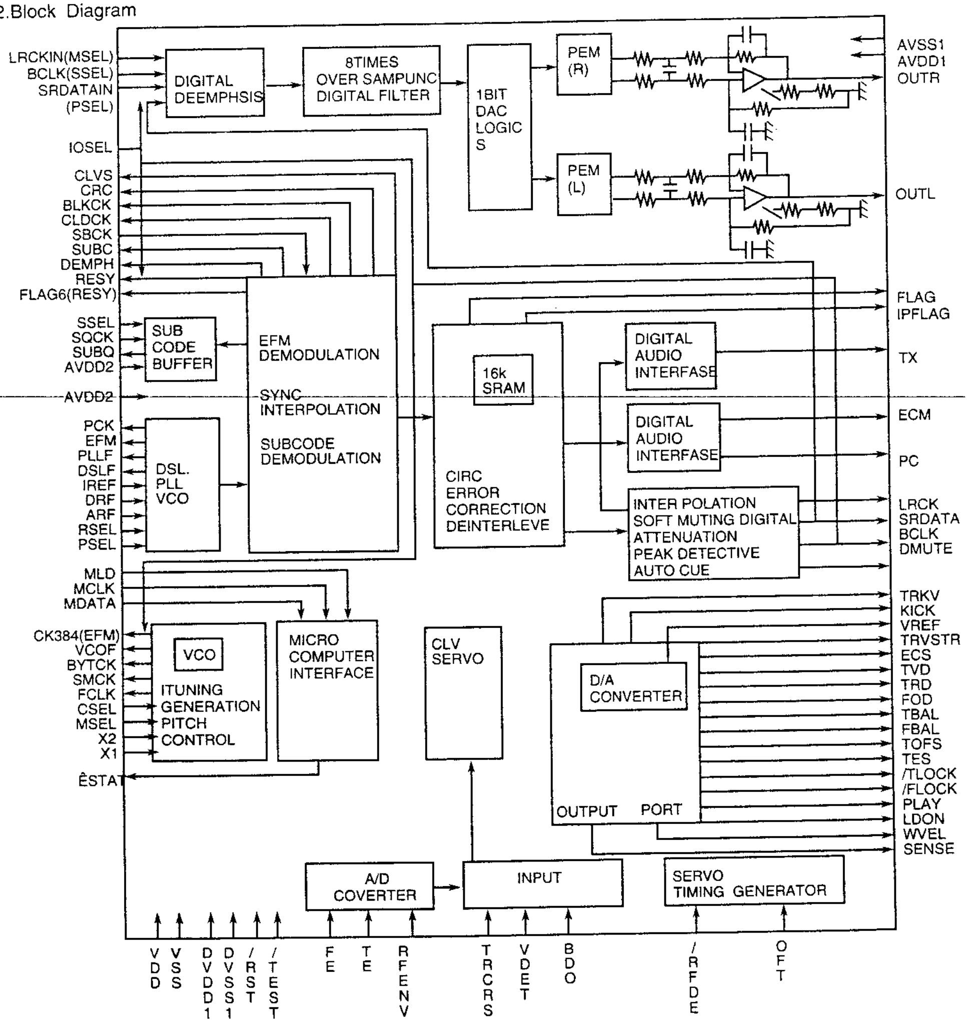

INL 20
LPF1 19
VREFIN 18
DC-OUT 17
LPF2 16
VCANF 15
VCC 14
LPF3 13
LPF4 12
OUTL 11
REF
BOOST ON/OFF
VCR
BOOST GAIN
ADD LEVEL
LEVEL DEP
CLIP DEP
DECORDER
LED
BASS.ADD.SW
1 IN,R
2 BOOST ON/OFF SMOOTHING
3 ENABLE
4 DATA
5 CLOCK
6 GND
7 DET.OUT
8 LED
9 BASS.OUT
10 OUTR

■ MN35510(IC651):DIGITAL SERVO&DIGITAL SIGNAL PROCESSER

1. Terminal Layout


20 ~ 1
21
80
40
61
41 ~ 60

2.Block Diagram

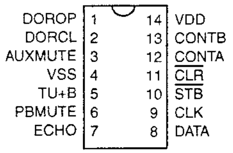

LRCKIN(MSEL)
BCLK(SSEL)
SRDATAIN
(PSEL)
IOSEL
CLVS
CRC
BLKCK
CLDCK
SBCK
SUBC
DEMPH
RESY
FLAG6(RESY)
SSEL
SQCK
SUBQ
AVDD2
AVDD2
PCK
EFM
PLLF
DSLF
IREF
DRF
ARF
RSEL
PSEL
MLD
MCLK
MDATA
CK384(EFM)
VCOF
BYTCK
SMCK
FCLK
CSEL
MSEL
X2
X1
ÊSTAT
DIGITAL DEEMPHSIS
8TIMES OVER SAMPUNC DIGITAL FILTER
1BIT DAC LOGICS
PEM (R)
PEM (L)
SUB CODE BUFFER
EFM DEMODULATION
SYNC INTERPOLATION
SUBCODE DEMODULATION
16k SRAM
CIRC ERROR CORRECTION DEINTERLEVE
DIGITAL AUDIO INTERFASE
DIGITAL AUDIO INTERFASE
INTER POLATION SOFT MUTING DIGITAL ATTENUATION PEAK DETECTIVE AUTO CUE
DSL. PLL VCO
VCO
ITUNING GENERATION PITCH CONTROL
MICRO COMPUTER INTERFACE
CLV SERVO
D/A CONVERTER
OUTPUT PORT
A/D COVERTER
INPUT
SERVO TIMING GENERATOR
AVSS1
AVDD1
OUTR
OUTL
FLAG
IPFLAG
TX
ECM
PC
LRCK
SRDATA
BCLK
DMUTE
TRKV
KICK
VREF
TRVSTR
ECS
TVD
TRD
FOD
TBAL
FBAL
TOFS
TES
/TLOCK
/FLOCK
PLAY
LDON
WVEL
SENSE
VDD
VSS
DVDD1
DVSS1
/RST
/TEST
FE
TE
RFENV
TRCRS
VDET
BDO
/RFDE
OFT

3. Description

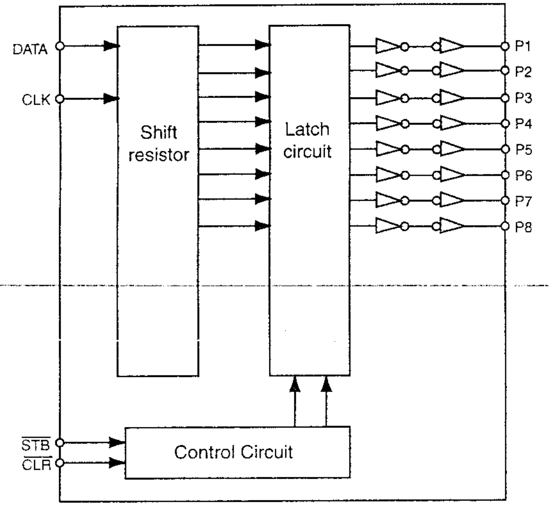
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Not used	41	TES	O	Tracking error shunt signal output(H:shunt)
2	LRCK	O	Not used	42	PLAY	–	Not used
3	SRDATA	O	Not used	43	WVEL	–	Not used
4	DVDD1	–	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	–	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	μcom command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	μcom command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μcom command load signal input	49	VCOF	–	Not used
10	SENSE	O	Sence signal output	50	AVDD2	–	Power supply(Analog)
11	FLOCK	O	Focus lock signal output Active :Low	51	AVSS2	–	Connected to GND(Analog)
12	TLOCK	O	Tracking lock signal output Active :Low	52	EFM	–	Not used
13	BLKCK	O	sub-code·block·clock signal output	53	PCK	–	Not used
14	SQCK	I	Outside clock for sub-code Q resister input	54	PDO	–	Not used
15	SUBQ	O	Sub-code Q -code output	55	SUBC	–	Not used
16	DMUTE	–	Connected to GND	56	SBCK	–	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	–	Connected to GND(for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	–	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	–	Not used	60	VDD	–	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	–	Not used
22	TVD	O	Traverse drive output	62	CLDCK	–	Not used
23	PC	–	Not used	63	FLAG	–	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	–	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	–	Not used
26	KICK	O	Kick pulse output	66	CLVS	–	Not used
27	TRD	O	Tracking drive output	67	CRC	–	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	–	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	–	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	–	pull up
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	–	Power supply(Digital)
33	TE	I	Tracking error signal input(Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	–	Connected to GND
35	VDET	I	Vibration detect signal input(H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input(H:off track)	76	RSEL	–	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	–	Connected to GND
38	RFDET	I	RF detect signal input(L:detect)	78	PSEL	–	Connected to GND
39	BDO	I	BDO input pin(L:detect)	79	MSEL	–	Connected to GND
40	LDON	O	Laser ON signal output(H:on)	80	SSEL	–	Pull up

■NJU3711D(IC854) : Mute & Rolling panel motor control

1.Terminal Layout


DOROP 1
DORCL 2
AUXMUTE 3
VSS 4
TU+B 5
PBMUTE 6
ECHO 7
14 VDD
13 CONTB
12 CONTA
11 CLR
10 STB
9 CLK
8 DATA

2.Block Diagram

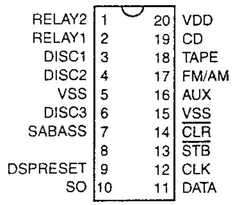

DATA
CLK
Shift resistor
Latch circuit
P1
P2
P3
P4
P5
P6
P7
P8
STB
CLR
Control Circuit

3.Pin Function

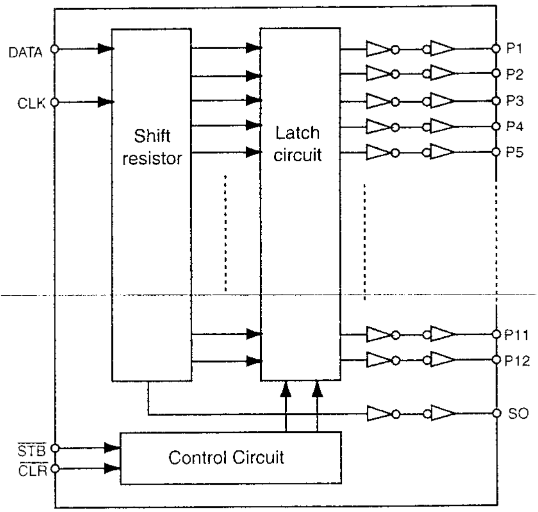
PIN No.	I/O	Symbol	Function
1~3	O	DOROP/DORCL/AUXMUTE	Parallel conversion data output terminal.
4	-	VSS	Connect to GND.
5~7	O	TU+B/PBMUTE/ECHO	Parallel conversion data output terminal.
8	I	DATA	Serial data input terminal.
9	I	CLK	Clock signal input terminal.
10	I	STB	Strobe signal input terminal.
11	I	CLR	Clear signal input terminal.
12.13	O	CONTA/CONTB	Parallel conversion data output terminal
14	-	VDD	Power supply.

■ NJU3714D(IC811) : L.E.D.Driver

1.Terminal Layout


RELAY2 1
RELAY1 2
DISC1 3
DISC2 4
VSS 5
DISC3 6
SABASS 7
8
DSPRESET 9
SO 10
20 VDD
19 CD
18 TAPE
17 FM/AM
16 AUX
15 VSS
14 CLR
13 STB
12 CLK
11 DATA

2.Block Diagram


DATA
CLK
Shift resistor
Latch circuit
P1
P2
P3
P4
P5
P11
P12
SO
STB
CLR
Control Circuit

3.Pin Function

PIN No.	I/O	Symbol	Function
1~4	O	RELAY1.2/DISC1.2	Parallel conversion data output terminal.
5	-	VSS	Connect to GND.
6~9	O	DISC3/SABASS/DSPRESET	Parallel conversion data output terminal.
10	O	SO	Serial data output terminal.
11	I	DATA	Serial data input terminal.
12	I	CLK	Clock signal input terminal.
13	I	STB	Strobe signal input terminal.
14	I	CLR	Clear signal input terminal.
15	-	VSS	Connect to GND.
16~19	O	AUX/FM/AM/TAPE/CD	Parallel conversion data output terminal
20	-	VDD	Power supply.

Disassembly method

< Main body >

Removing the Metal Cover (See Fig.1 to 3)

1. Remove the six A screws attaching the metal cover on the back of the body.
2. Remove the two B screws attaching the metal cover on both sides of the body.
3. Lift the metal cover on the back of the body and remove it from the body.

CAUTION: DO NOT break the front panel tab fitted to the metal cover.

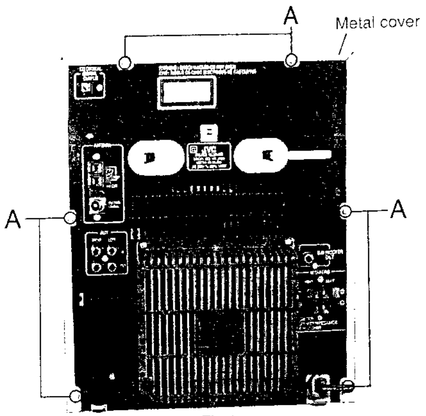

A
Metal cover
A
A

Fig.1

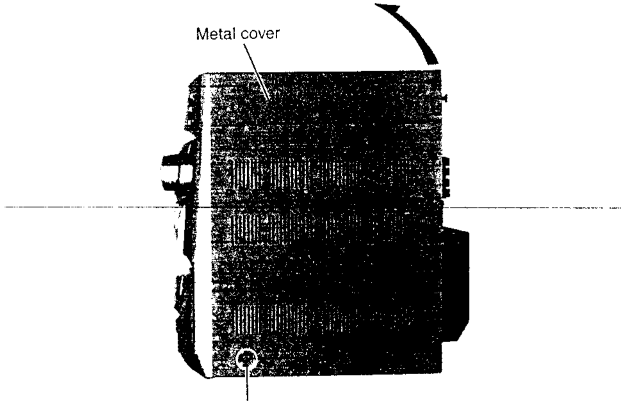

Metal cover
B

Fig.2

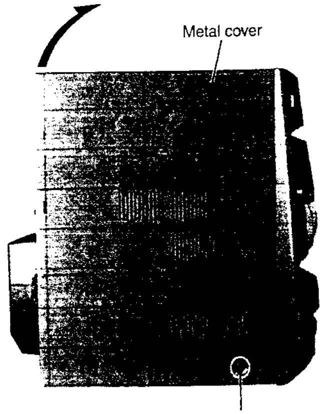

Metal cover
B

Fig.3

Removing the CD Changer Mechanism Assembly (See Fig.4 to 6)

- Prior to performing the following procedure, remove the metal cover.

1. Disconnect the connector CN410 of the card wire connecting the CD changer mechanism board to the main board.
2. Remove the two C screws on the upper side of the CD changer assembly and the two D screws on the back of the rear panel.
3. Remove the plastic rivet attaching the main board.
4. Lift and remove the CD changer mechanism assembly on the back of the body while pulling the rear panel and the front panel assembly.

* To prevent damage to the CD fitting, be sure to pull the rear panel and the front panel assembly enough to remove the CD changer mechanism.

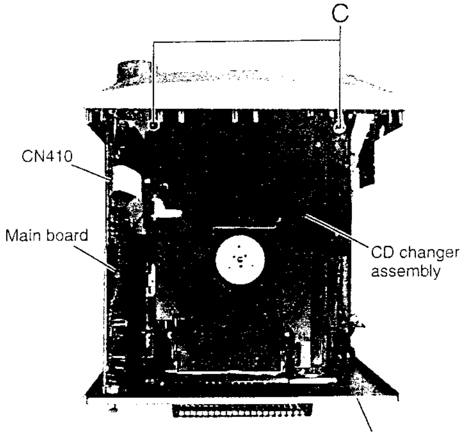

C
CN410
Main board
CD changer assembly
Rear panel

Fig.4

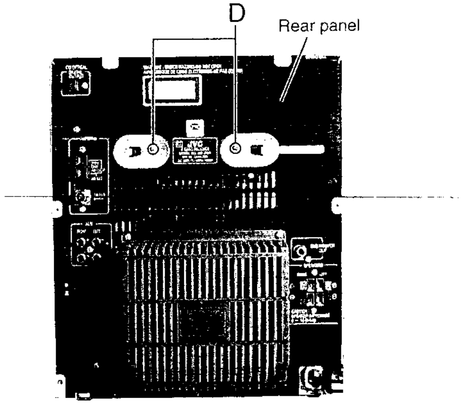

D
Rear panel

Fig.5

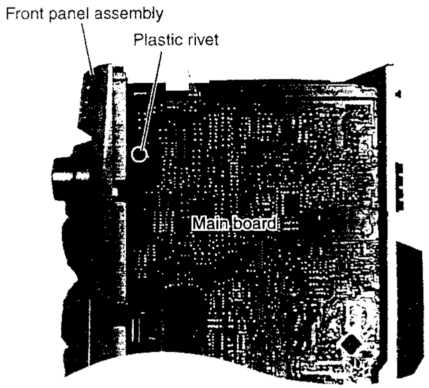

Front panel assembly
Plastic rivet
Main board

Fig.6

Disassembly method

< Main body >

Removing the Metal Cover (See Fig.1 to 3)

1. Remove the six A screws attaching the metal cover on the back of the body.
2. Remove the two B screws attaching the metal cover on both sides of the body.
3. Lift the metal cover on the back of the body and remove it from the body.

CAUTION: DO NOT break the front panel tab fitted to the metal cover.

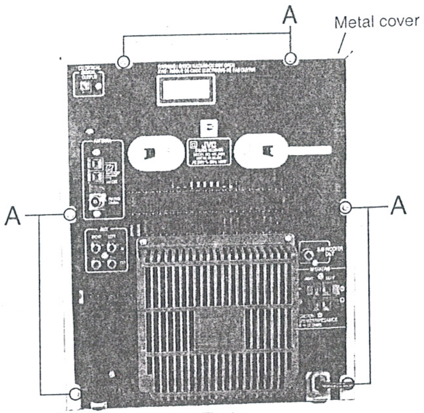

A
Metal cover
A
A

Fig.1

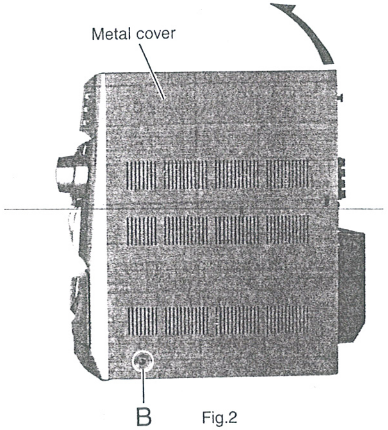

Metal cover
B

Fig.2

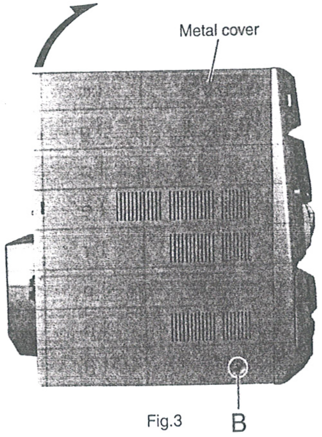

Metal cover
B

Fig.3

Removing the CD Changer Mechanism Assembly (See Fig.4 to 6)

- Prior to performing the following procedure, remove the metal cover.

1. Disconnect the connector CN410 of the card wire connecting the CD changer mechanism board to the main board.
2. Remove the two C screws on the upper side of the CD changer assembly and the two D screws on the back of the rear panel.
3. Remove the plastic rivet attaching the main board.
4. Lift and remove the CD changer mechanism assembly on the back of the body while pulling the rear panel and the front panel assembly.

* To prevent damage to the CD fitting, be sure to pull the rear panel and the front panel assembly enough to remove the CD changer mechanism.

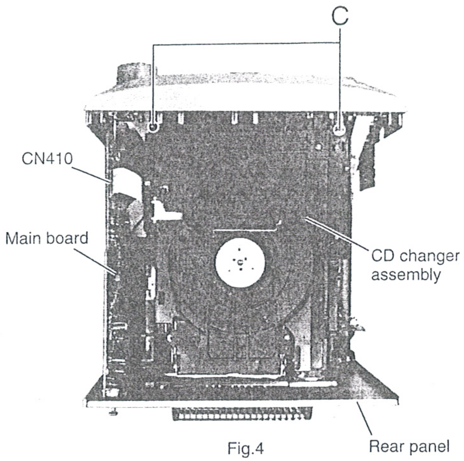

C
CN410
Main board
CD changer assembly
Rear panel

Fig.4

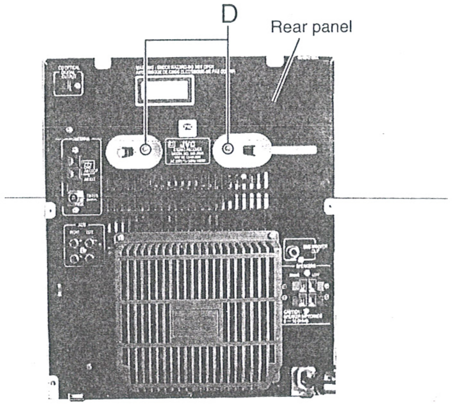

D
Rear panel

Fig.5

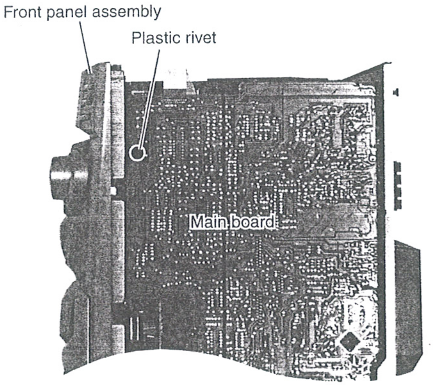

Front panel assembly
Plastic rivet
Main board

Fig.6

< Front Assembly >

■ Removing the Front Panel Assembly

(See Fig.7 to 9)

- Prior to performing the following procedure, remove the metal cover and CD changer mechanism assembly.

1. Disconnect the card wires from connector CN411, CN412 and CN413 on the main board.

- It is easy for the previous extraction of POLAR board from CN420 to remove the wire.

2. Disconnect the flat wire from connector CN703 on the amplifier board.
3. Remove the four E screws attaching the front panel assembly on the bottom of the body.
4. Release the two joints(a) and (b) on the lower left and right sides of the body using a screwdriver, and remove the front panel assembly toward the front.

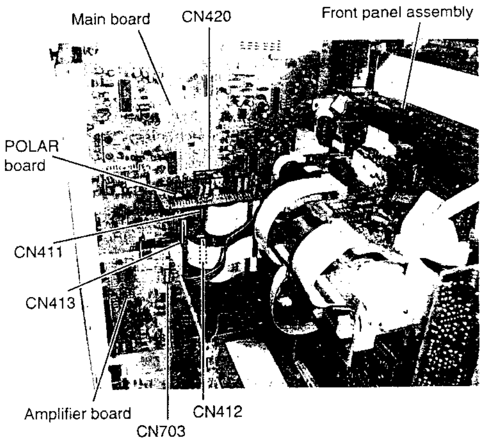

Main board
CN420
Front panel assembly
POLAR board
CN411
CN413
Amplifier board
CN703
CN412

Fig.7

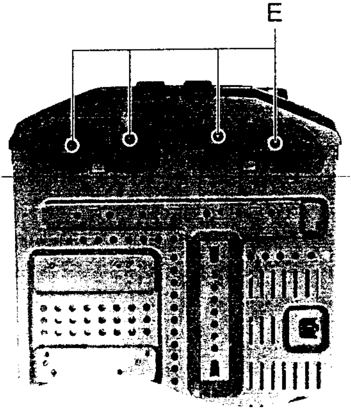


Fig.8

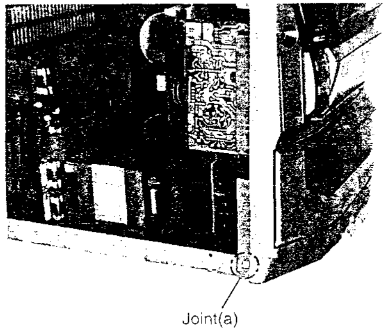


Fig.9a

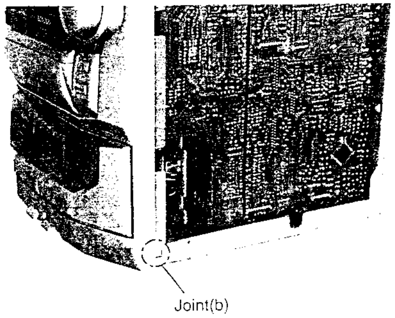


Fig.9b

■ Removing the Rolling panel Panel assembly

(See Fig.10 and 11)

1. Disconnect the card wires from connector CN817,CN812, CN951 and CN816 on the upper system control & FL board and on the rolling panel assembly on the reverse side of the front panel assembly
2. Disconnect the card wire from connector CN859 on the relay board on the back of the rolling panel assembly.
3. Remove the six F screws attaching the stay bracket.
4. Remove the four G screws attaching the rolling panel assembly.

- Disconnect the flat wire extending from the phones board through the slit of the rolling panel assembly.

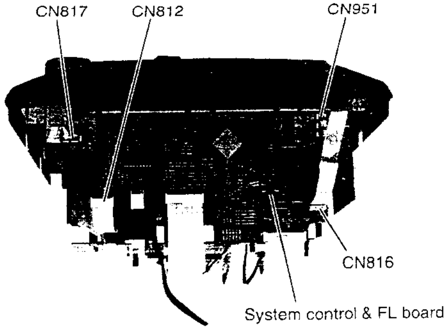

CN817
CN812
CN951
CN816
System control & FL board

Fig.10

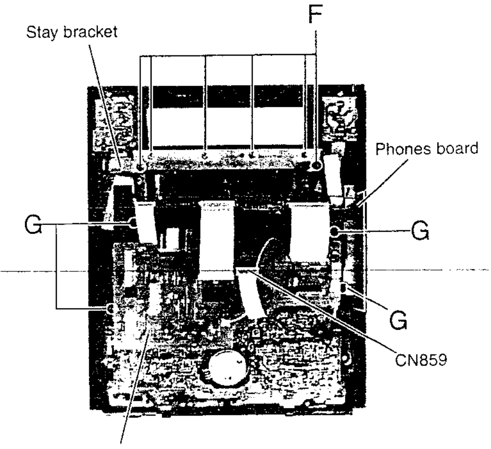

F
Stay bracket
Phones board
G
G
G
CN859
Relay board

Fig.11

■ Removing the Cassette Mechanism Assembly

(See Fig.12)

- Prior to performing the following procedure, remove the rolling panel assembly.

1. Remove the four H screws and four H1 screws attaching the cassette mechanism assembly.

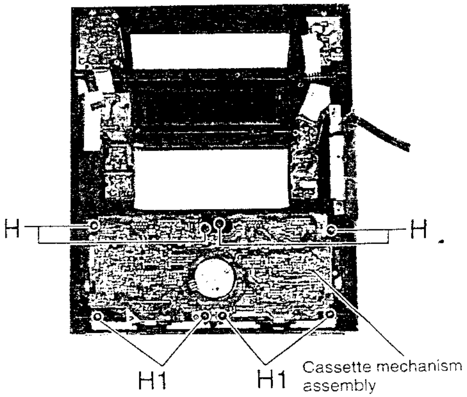

H
H
H1
H1
Cassette mechanism assembly

Fig.12

< Front Assembly >

■ Removing the Front Panel Assembly
(See Fig.7 to 9)

- Prior to performing the following procedure, remove the metal cover and CD changer mechanism assembly.

1. Disconnect the card wires from connector CN411, CN412 and CN413 on the main board.

- It is easy for the previous extraction of POLAR board from CN420 to remove the wire.

2. Disconnect the flat wire from connector CN703 on the amplifier board.
3. Remove the four E screws attaching the front panel assembly on the bottom of the body.
4. Release the two joints(a) and (b) on the lower left and right sides of the body using a screwdriver, and remove the front panel assembly toward the front.

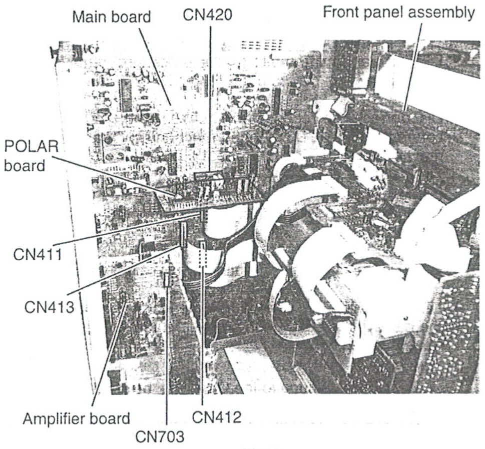

Main board
CN420
Front panel assembly
POLAR board
CN411
CN413
Amplifier board
CN703
CN412

Fig.7

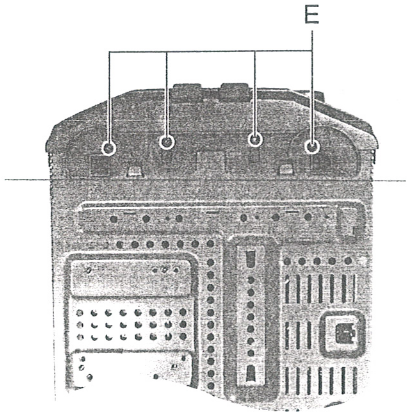


Fig.8

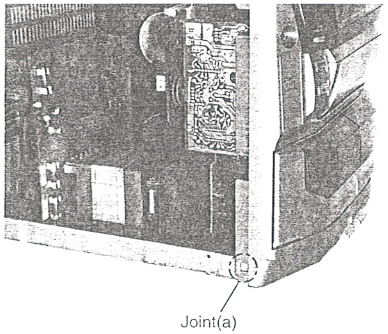


Fig.9a

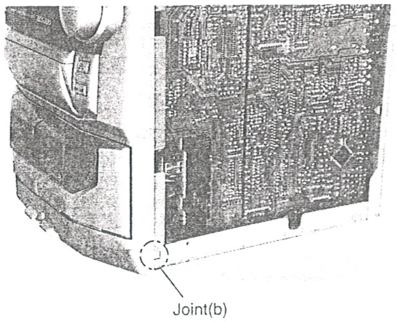


Fig.9b

■ Removing the Rolling panel Panel assembly
(See Fig.10 and 11)

1. Disconnect the card wires from connector CN817,CN812, CN951 and CN816 on the upper system control & FL board and on the rolling panel assembly on the reverse side of the front panel assembly
2. Disconnect the card wire from connector CN859 on the relay board on the back of the rolling panel assembly.
3. Remove the six F screws attaching the stay bracket.
4. Remove the four G screws attaching the rolling panel assembly.

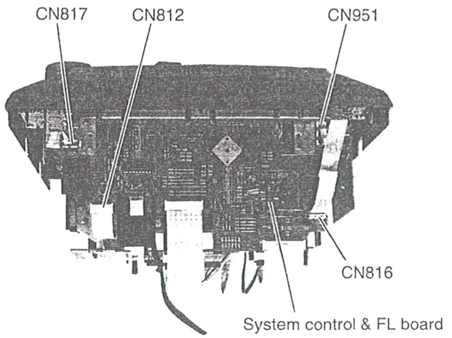

CN817
CN812
CN951
CN816
System control & FL board

Fig.10

- Disconnect the flat wire extending from the phones board through the slit of the rolling panel assembly.

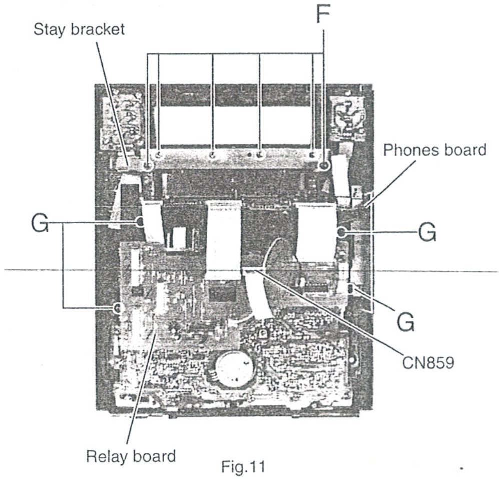

Stay bracket
F
Phones board
G
G
G
CN859
Relay board

Fig.11

■ Removing the Cassette Mechanism Assembly
(See Fig.12)

- Prior to performing the following procedure, remove the rolling panel assembly.

1. Remove the four H screws and four H1 screws attaching the cassette mechanism assembly.

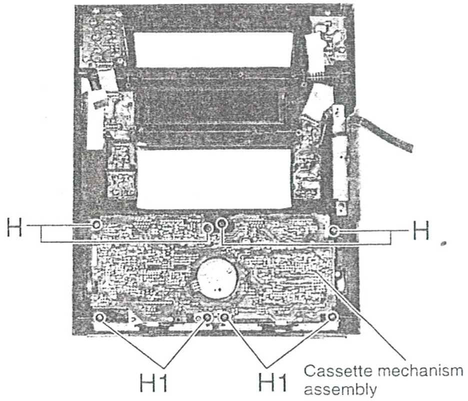

H
H
H1
H1
Cassette mechanism assembly

Fig.12

■ Removing the System Control & FL Board (See Fig.13 and 14)

1. Disconnect the card wires and flat wires from connector CN812, CN817, CN816, CN951, CN813, CN810 and CN811 on the system control & FL board respectively.
2. Disconnect the flat wire from connector D851 on the relay board.
3. Remove the six F screws attaching the stay bracket.
4. Remove the two I screws attaching the system control & FL board.

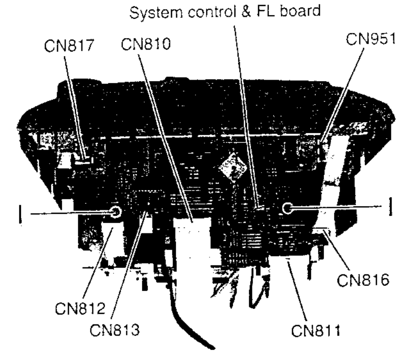

System control & FL board
CN817
CN810
CN951
I
I
CN816
CN812
CN813
CN811

Fig.13

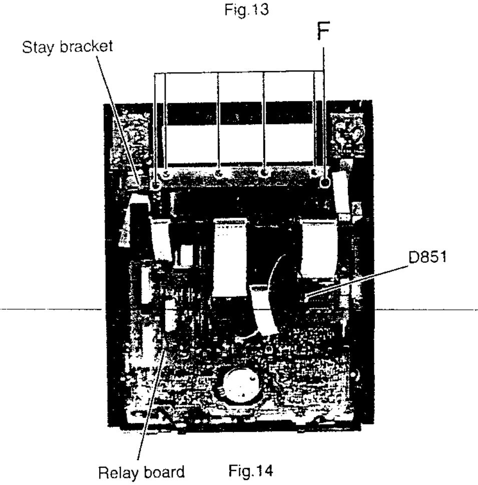

Stay bracket
F
D851
Relay board

Fig.14

■ Removing the Relay Board (See Fig.15)

1. Disconnect the card wires, the 2P harness and the flat wires from connector CN856, CN857, CN859, CN863, and D851 on the relay board respectively.
2. Remove the one screw J attaching the relay board.
3. Release the five c tabs fitted to the relay board.

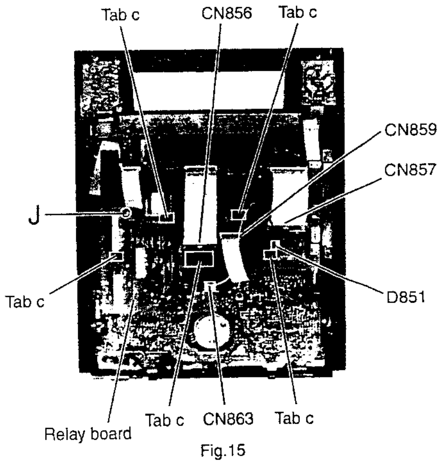

Tab c
CN856
Tab c
CN859
CN857
J
Tab c
D851
Relay board
Tab c
CN863
Tab c

Fig.15

■ Removing Each Board of the Front Panel Assembly (See Fig.16 and 17)

1. Disconnect the flat wire from connector CN816 on the system control & FL board on top of the rolling panel assembly.
2. Remove the three K screws attaching the power switch board.
3. Remove the two L screws attaching the phones board together with bracket.
   - Remove the flat wire extending from the phones board through the slit of the rolling panel assembly.
4. Remove the four M screws attaching the CD eject board and unsolder the flat wire.
   - Remove the rolling panel assembly.
5. Pull out the volume knob and nut toward the front.
6. Remove the two N screws attaching the volume board and unsolder the flat wire.
7. Remove the three O screws attaching the function board 1 and unsolder the flat wire.
8. Remove the four P screws attaching the function board 2.

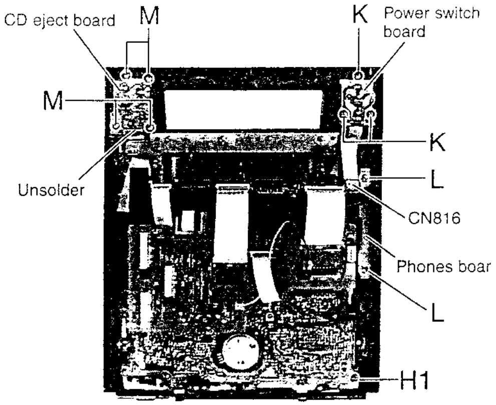

CD eject board
M
K
Power switch board
M
K
Unsolder
L
CN816
Phones boar
L
H1

Fig.16

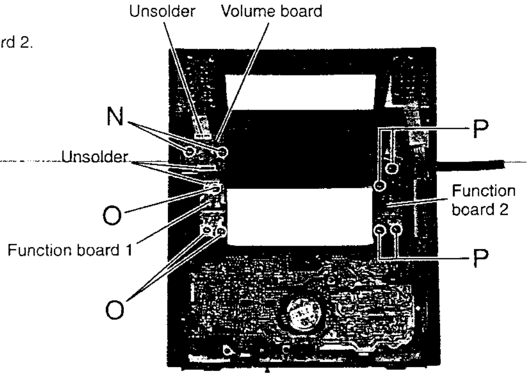

Unsolder
Volume board
N
P
Unsolder
Function board 2
O
Function board 1
P
O

Fig.17

Removing the System Control & FL Board (See Fig.13 and 14)

1. Disconnect the card wires and flat wires from connector CN812, CN817, CN816, CN951, CN813, CN810 and CN811 on the system control & FL board respectively.
2. Disconnect the flat wire from connector D851 on the relay board.
3. Remove the six F screws attaching the stay bracket.
4. Remove the two I screws attaching the system control & FL board.

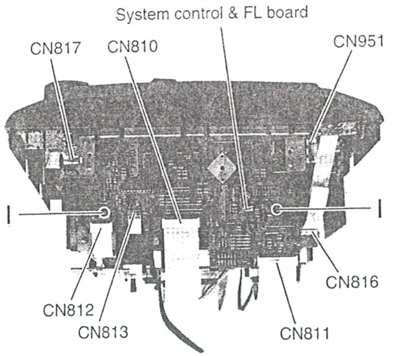

System control & FL board
CN817
CN810
CN951
I
I
CN816
CN812
CN813
CN811

Fig.13

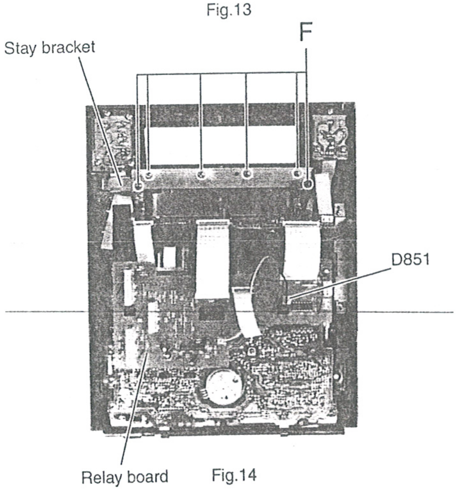

Stay bracket
F
D851
Relay board

Fig.14

Removing the Relay Board (See Fig.15)

1. Disconnect the card wires, the 2P harness and the flat wires from connector CN856, CN857, CN859, CN863, and D851 on the relay board respectively.
2. Remove the one screw J attaching the relay board.
3. Release the five c tabs fitted to the relay board.

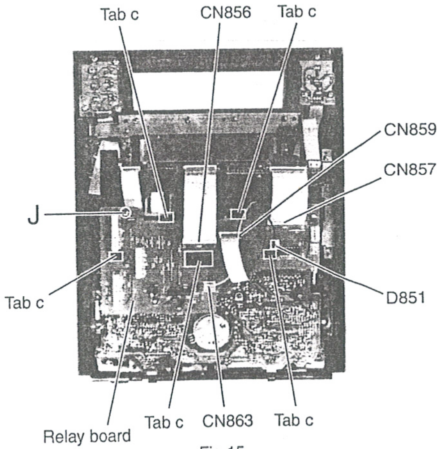

Tab c
CN856
Tab c
CN859
CN857
J
Tab c
D851
Relay board
Tab c
CN863
Tab c

Fig.15

Removing Each Board of the Front Panel Assembly (See Fig.16 and 17)

1. Disconnect the flat wire from connector CN816 on the system control & FL board on top of the rolling panel assembly.
2. Remove the three K screws attaching the power switch board.
3. Remove the two L screws attaching the phones board together with bracket.
   - Remove the flat wire extending from the phones board through the slit of the rolling panel assembly.
4. Remove the four M screws attaching the CD eject board and unsolder the flat wire.
   - Remove the rolling panel assembly.
5. Pull out the volume knob and nut toward the front.
6. Remove the two N screws attaching the volume board and unsolder the flat wire.
7. Remove the three O screws attaching the function board 1 and unsolder the flat wire.
8. Remove the four P screws attaching the function board 2.

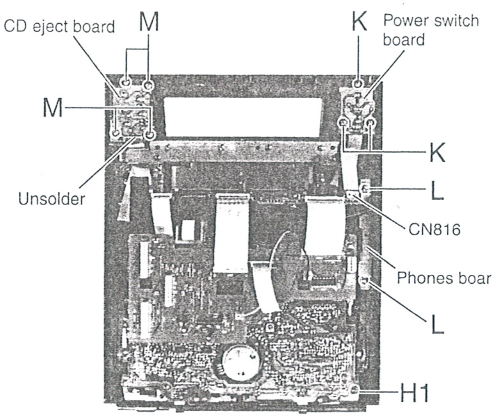

CD eject board
M
K
Power switch board
M
K
Unsolder
L
CN816
Phones boar
L
H1

Fig.16

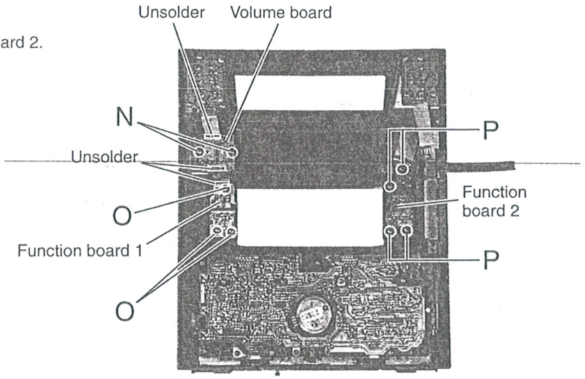

Unsolder
Volume board
N
P
Unsolder
Function board 2
O
Function board 1
P
O

Fig.17

■ Removing the Speaker Board (See Fig.24)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.
- The following procedure can be performed even if the front panel assembly is attached.

1. Pull out the speaker board upward from connector CN105 on the power board.

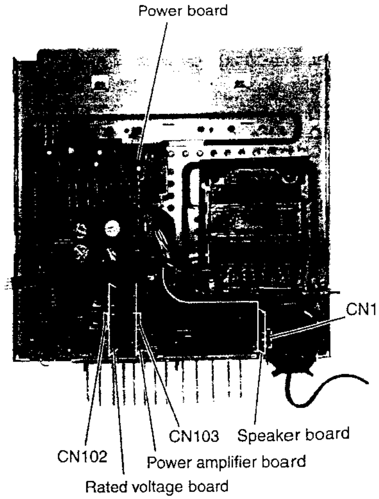

Power board
CN105
CN103
Speaker board
CN102
Power amplifier board
Rated voltage board

Fig.24

■ Removing the Power Transformer Board (See Fig.26)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

1. Disconnect the 5P harness and the flat wire from connector CN109 and CN111 on the power board.
2. Remove the four W screws attaching the power transformer assembly.
3. Push the cord stopper upward to remove it.

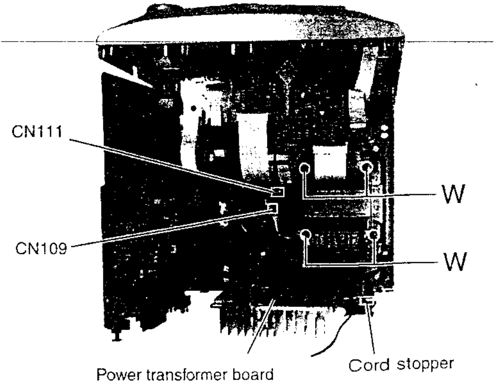

CN111
CN109
W
W
Power transformer board
Cord stopper

Fig.26

■ Removing the rolling Panel Assembly (See Fig.27)

1. Remove the two X screws attaching the rolling panel assembly.
2. Remove the rolling panel assembly while pulling outward the left and right hooks attaching the rolling panel assembly.

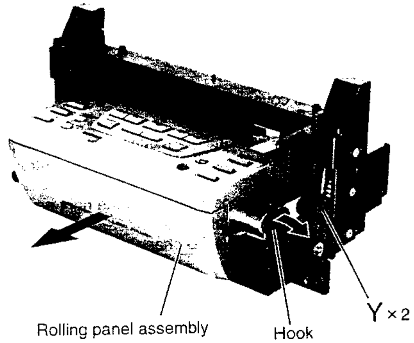

Rolling panel assembly
Hook
Y ×2

Fig.27

■ Removing the operation switch Board (See Fig.28 and 29)

1. Remove the six Y screws attaching the cover and the bracket.
2. Release the two f tabs fitted to the bracket, and pull out the left and right panel holders.
3. Remove the two Z screws attaching the operation switch board.

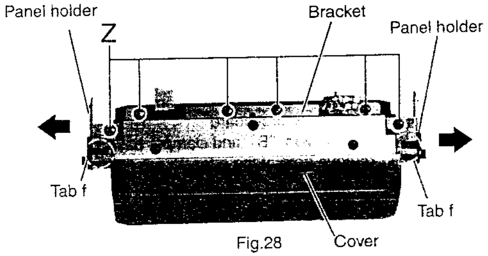

Panel holder
Z
Bracket
Panel holder
Tab f
Tab f
Cover

Fig.28

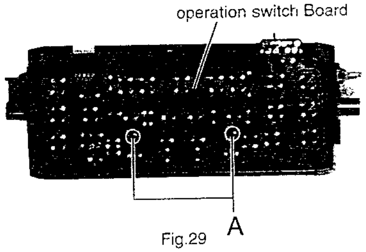

operation switch Board
A

Fig.29

■ Removing the Drive Motor (See Fig.30 and 31)

1. Remove the two A screws and the two B screw attaching
2. Pull out the gear shaft "a" upward.
3. Remove the motor belt.

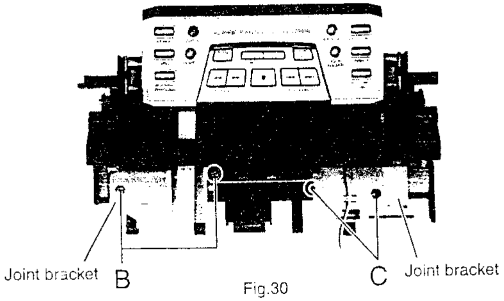

Joint bracket
B
C
Joint bracket

Fig.30

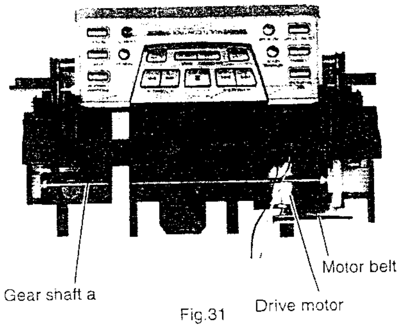

Gear shaft a
Motor belt
Drive motor

Fig.31

Removing the Speaker Board (See Fig.24)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.
- The following procedure can be performed even if the front panel assembly is attached.

1. Pull out the speaker board upward from connector CN105 on the power board.

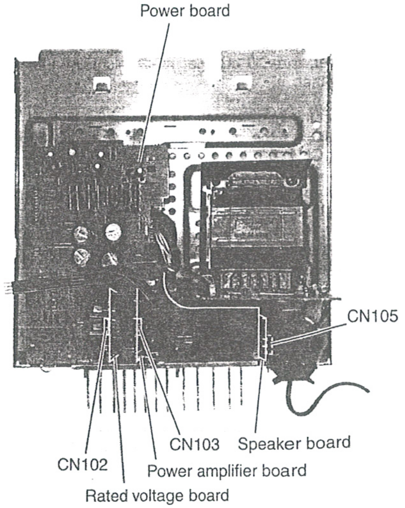

Power board
CN105
CN103
Speaker board
CN102
Power amplifier board
Rated voltage board

Fig.24

Removing the Power Transformer Board (See Fig.26)

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

1. Disconnect the 5P harness and the flat wire from connector CN109 and CN111 on the power board.
2. Remove the four W screws attaching the power transformer assembly.
3. Push the cord stopper upward to remove it.

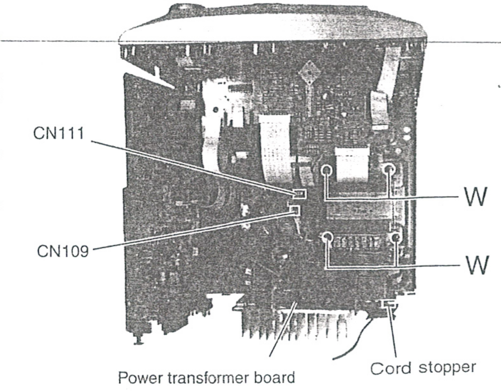

CN111
W
CN109
W
Power transformer board
Cord stopper

Fig.26

Removing the rolling Panel Assembly (See Fig.27)

1. Remove the two X screws attaching the rolling panel assembly.
2. Remove the rolling panel assembly while pulling outward the left and right hooks attaching the rolling panel assembly.

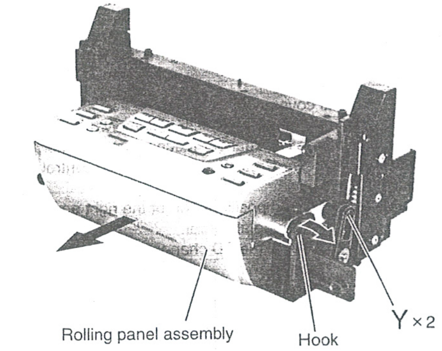

Rolling panel assembly
Hook
Y × 2

Fig.27

Removing the operation switch Board (See Fig.28 and 29)

1. Remove the six Y screws attaching the cover and the bracket.
2. Release the two f tabs fitted to the bracket, and pull out the left and right panel holders.
3. Remove the two Z screws attaching the operation switch board.

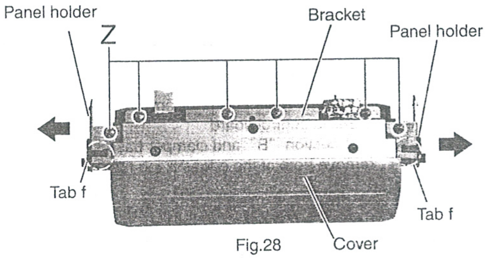

Panel holder
Z
Bracket
Panel holder
Tab f
Tab f
Cover

Fig.28

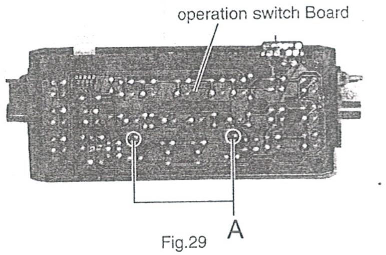

operation switch Board
A

Fig.29

Removing the Drive Motor (See Fig.30 and 31)

1. Remove the two A screws and the two B screw attaching
2. Pull out the gear shaft "a" upward.
3. Remove the motor belt.

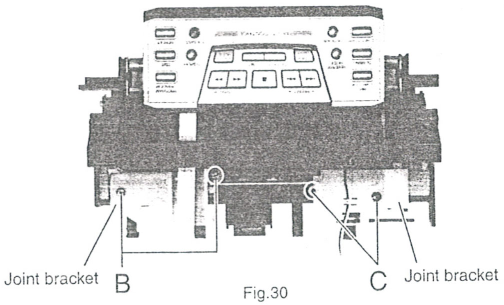

Joint bracket
B
C
Joint bracket

Fig.30

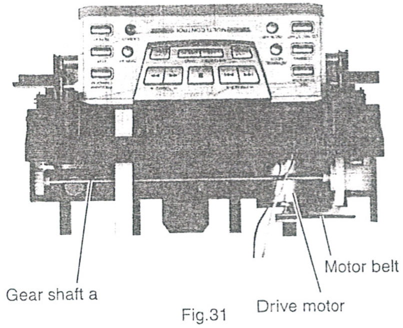

Motor belt
Gear shaft a
Drive motor

Fig.31

≪CD Changer Mechanism Type:VC3 Section≫

■Removing the CD Servo control board (See Fig.1)

1. *Remove the metal cover.*
2. Remove the CD changer mechanism assembly.
3. From bottom side the CD changer mechanism assembly, remove the two screws 1 retaining the CD servo control board.
4. Absorb the four soldered positions "M" of the right and left motors with a soldering absorber.
5. Pull out the earth wire on the CD changer mechanism assembly.
6. The two screws A is removed and C.B.holder is detached.
7. Disconnect the connector CN854 on the CD servo control board.
8. Disconnect the card wire CN601 and the connector CN801 on the CD servo control board.

■Removing the CD tray assembly (See Fig.2～4)

1. Remove the front panel assembly.
2. Remove the CD changer mechanism assembly.
3. Remove the CD Servo control board.
4. From the T.bracket section "B" and clamper base section "C" , remove both of the edges fixing the rod(See Fig.2 and 3).
5. Remove the screw 2 retaining the Disc stopper (See Fig.3).
6. Remove the three screws 3 retaining the T.bracket (See Fig.3).
7. Remove the screws 4 retaining the clamper assembly (See Fig.3).
8. From the left side face of the chassis assembly, remove the one screw 5 retaining both of the return spring and lock lever(See Fig. 4).
9. By removing the pawl at the section "D" fixing the return spring, dismount the return spring(See Fig.4).
10. Remove the three lock levers(See Fig.4).

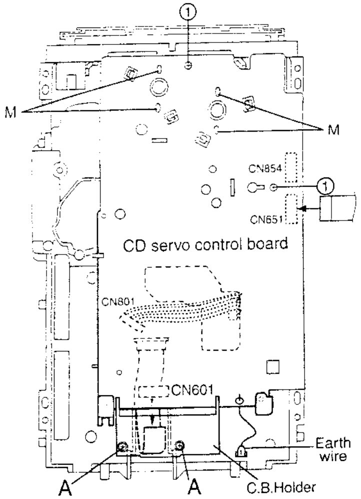

①
M
M
CN854
①
CN651
CD servo control board
CN801
CN601
Earth wire
A
A
C.B.Holder

Fig.1

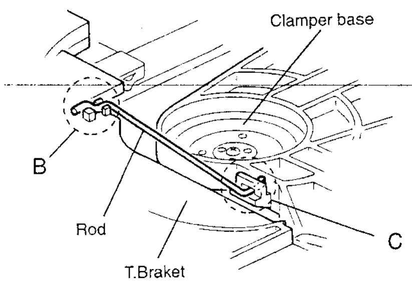

Clamper base
B
Rod
C
T.Braket

Fig.2

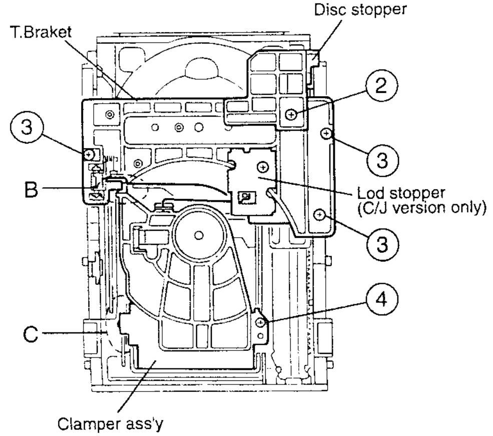

Disc stopper
T.Braket
②
③
③
B
Lod stopper
(C/J version only)
③
④
C
Clamper ass'y

Fig.3

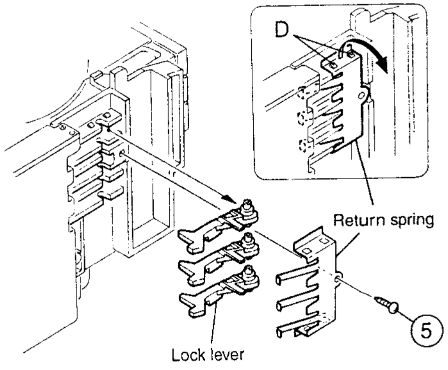

D
Return spring
Lock lever
⑤

Fig.4

11. Check whether the lifter unit stopper has been caught into the hole at the section "E" of CD tray assembly as shown in Fig.5.
12. Make sure that the driver unit elevator is positioned as shown in Fig.6 from to the second or fifth hole on the left side face of the CD changer mechanism assembly.

[Caution] In case the driver unit elevator is not at above position, set the elevator to the position as shown in Fig.7 by manually turning the pulley gear as shown in Fig.8.

13. Manually turn the motor pulley in the clockwise direction until the lifter unit stopper is lowered from the section "E" of CD tray assembly(See Fig.8).
14. Pull out all of the three stages of CD tray assembly in the arrow direction "F" until these stages stop (See Fig.6).
15. At the position where the CD tray assembly has stopped, pull out the CD tray assembly while pressing the two pawls "G and G" on the back side of CD tray assembly(See Fig.9). In this case, it is easy to pull out the assembly when it is pulled out first from the stage CD tray assembly.

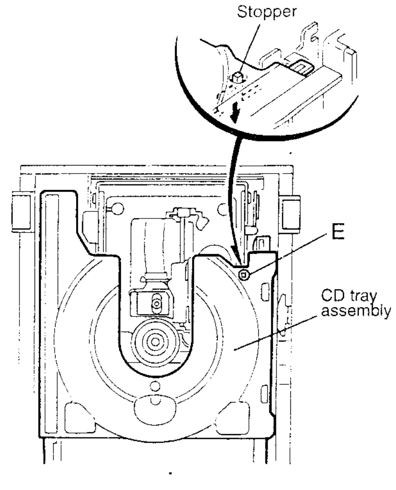

Stopper
E
CD tray assembly

Fig.5

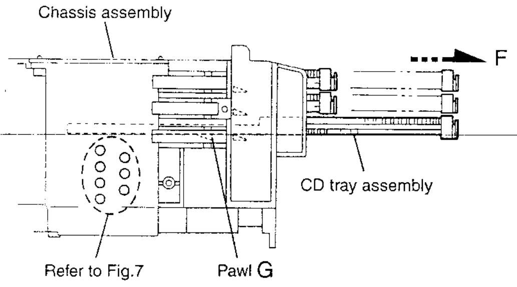

Chassis assembly
F
CD tray assembly
Refer to Fig.7
Pawl G

Fig.6

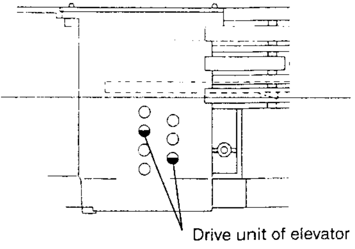

Drive unit of elevator

Fig.7

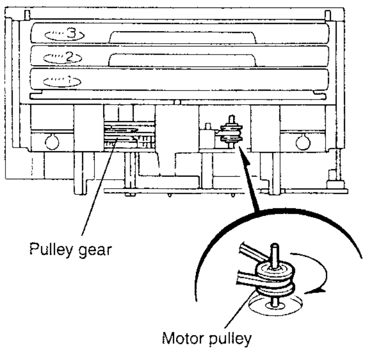

3
2
1
Pulley gear
Motor pulley

Fig.8

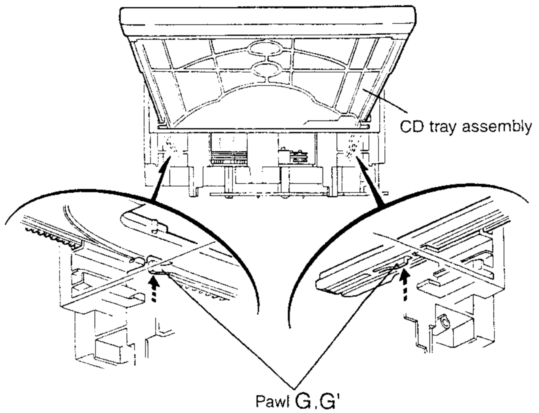

CD tray assembly
Pawl G,G'

Fig.9

■ Removing the CD loading mechanism assembly(See Fig.10)

1. While turning the cams R1 and R2 assembly in the arrow direction "H" , align the shaft "I" of the CD loading mechanism assembly to the position shown in
2. Fig.10.
   Remove the four screws 6 retaining the CD loading mechanism assembly.

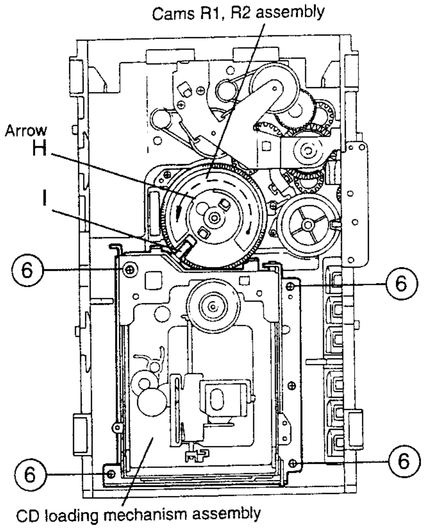

Cams R1, R2 assembly
Arrow
H
I
6
6
6
6
CD loading mechanism assembly

Fig.10

■ Removing the CD traverse mechanism (See Fig.11 and 12)

1. For dismounting only the CD traverse mechanism without removing the CD loading mechanism assembly, align the shaft "J" of the CD loading mechanism assembly to the position shown Fig.11 while turning the cam R1 and R2 assembly in the arrow direction "K" .
2. By raising the CD loading mechanism assembly in the arrow direction "L" , remove the assembly from the lifter unit

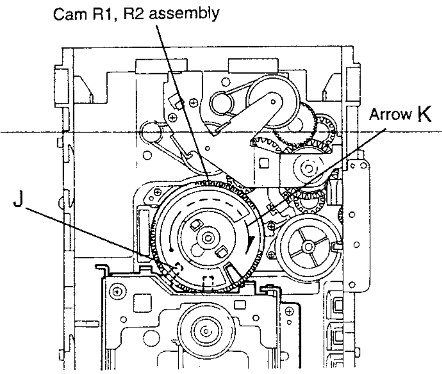

Cam R1, R2 assembly
Arrow K
J

Fig.11

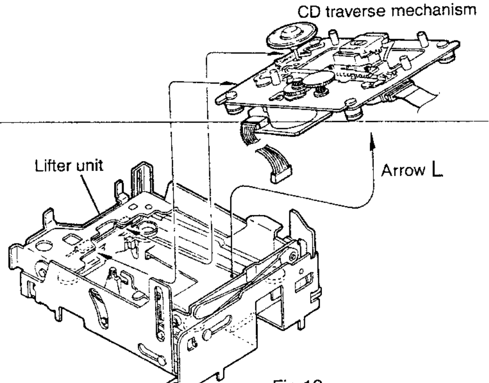

CD traverse mechanism
Lifter unit
Arrow L

Fig.12

■ Removing the CD pick unit (See Fig.13)

1. Move the cam gear in the arrow direction a . Then, the CD pickup unit will be moved in the arrow direction b .
2. According to the above step, shift the CD pickup unit to the center position.
3. While pressing the stopper retaining the shaft in the arrow direction c , pull out the shaft in the arrow direction d .
4. After dismounting the shaft from the CD pickup unit, remove the CD pickup unit

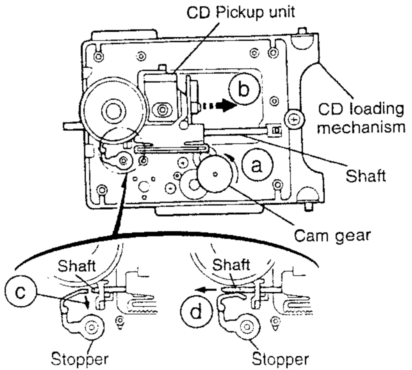

CD Pickup unit
b
CD loading mechanism
a
Shaft
Cam gear
Shaft
Shaft
c
d
Stopper
Stopper

Fig.13

■ Removing the cam unit (See Fig.14 ~17)

1. Remove the CD loading mechanism assembly.
2. While turning the cam gear L, align the pawl "N" position of the drive unit to the notch position(Fig.16) on the cam gear L.
3. Pull out the drive unit and cylinder gear(See Fig.17).
4. While turning the cam gear L, align the pawl "O" position of the select lever to the notch position(Fig.18) on the cam gear L.
5. Remove the four screws 9 retaining the cam unit(cam gear L and cams R1/R2 assembly)(See Fig.18).

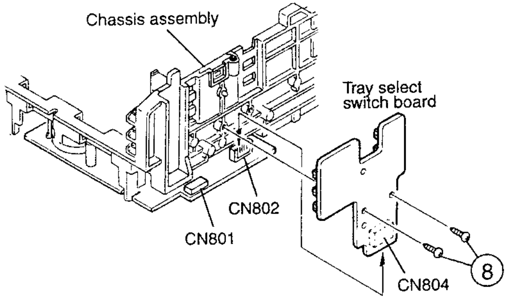

Chassis assembly
Tray select switch board
CN802
CN801
CN804
8

Fig.14

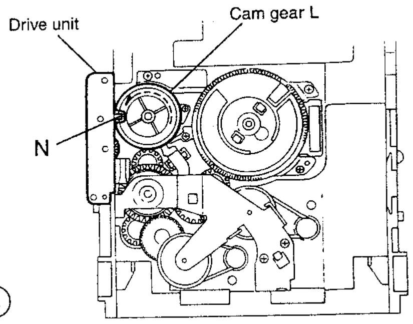

Drive unit
Cam gear L
N

Fig.15

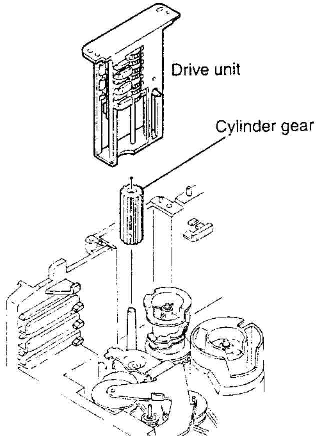

Drive unit
Cylinder gear

Fig.16

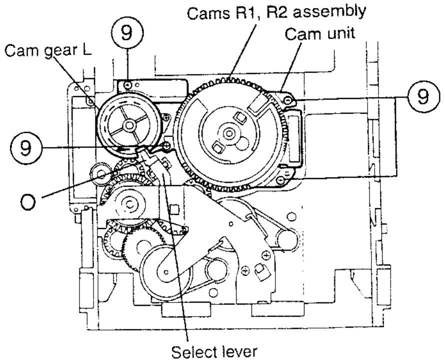

Cams R1, R2 assembly
Cam unit
Cam gear L
9
9
9
O
Select lever

Fig.17

■Removing the actuator motor and belt (See Fig.18~21)

1. Remove the two screws 10 retaining the gear bracket (See Fig.19).
2. While pressing the pawl "P" fixing the gear bracket in the arrow direction, remove the gear bracket (See Fig.19).
3. From the notch "Q section" on the chassis assembly fixing the edge of gear bracket, remove and take out the gear bracket(See Fig. 20).
4. Remove the belts respectively from the right and left actuator motor pulleys and pulley gears(See Fig. 19).
5. After turning over the chassis assembly, remove the actuator motor while spreading the four pawls "R" fixing the right and left actuator motors in the arrow direction(See Fig. 21).

[Note] When the chassis assembly is turned over under the conditions wherein the gear bracket and belt have been removed, then the pulley gear as well as the gear, etc. constituting the gear unit can possibly be separated to pieces. In such a case, assemble these parts by referring to the assembly and configuration diagram in Fig. 22.

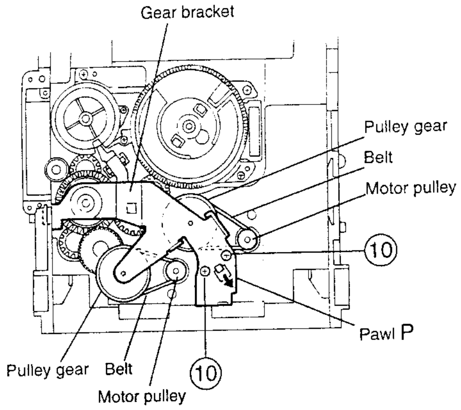

Gear bracket
Pulley gear
Belt
Motor pulley
⑩
Pawl P
Pulley gear
Belt
Motor pulley
⑩

Fig.18

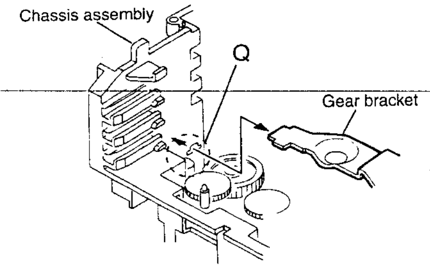

Chassis assembly
Q
Gear bracket

Fig.19

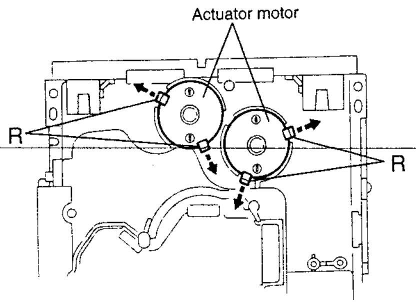

Actuator motor
R
R

Fig.20

Assembly and Configuration Diagram

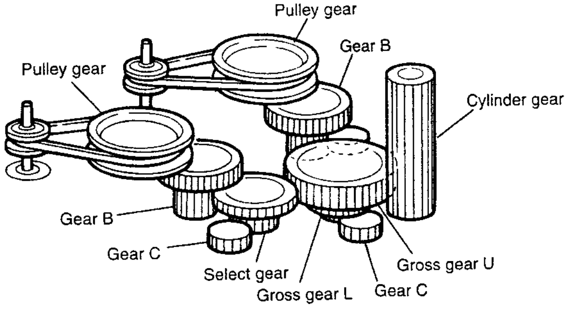

Pulley gear
Pulley gear
Gear B
Cylinder gear
Gear B
Gear C
Select gear
Gross gear L
Gear C
Gross gear U

Fig.21

■Removing the cams R1/R2 assembly and cam gear L(See Fig.22)

1. Remove the slit washer fixing the cams R1 and R2 assembly.
2. By removing the two pawls "S" fixing the cam R1, separate R2 from R1.
3. Remove the slit washer fixing the cam gear L.
4. Pull out the cam gear L from the C.G. base assembly.

■Removing the C.G. base assembly (See Fig.22 and 23)

Remove the three screws 11 retaining the C.G. base assembly.

[Caution] To reassemble the cylinder gear, etc.with the cam unit (cam gear and cans R1/R2 assembly), gear unit and drive unit, align the position of the pawl "N" on the drive unit to that o f the notch on the cam gear L. Then, make sure that the gear unit is engaged by turning the cam gear L (See Fig. 24).

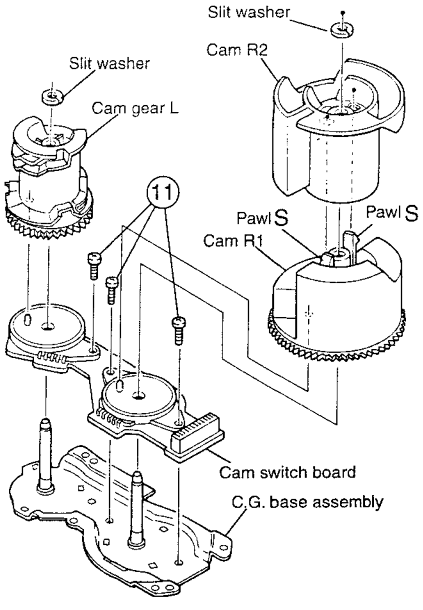

Slit washer
Cam R2
Slit washer
Cam gear L
⑪
Pawl S
Pawl S
Cam R1
Cam switch board
C.G. base assembly

Fig.22

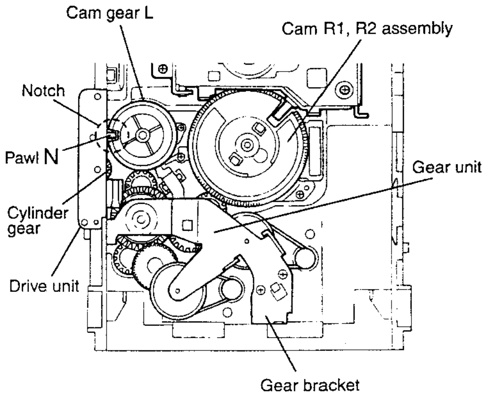

Cam gear L
Cam R1, R2 assembly
Notch
Pawl N
Gear unit
Cylinder gear
Drive unit
Gear bracket

Fig.23

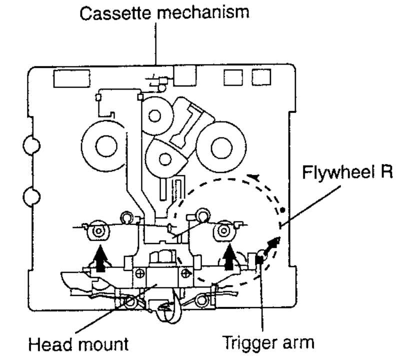
< Cassette Mechanism Section >

■ Removing the Playback,Recording and Eraser Heads

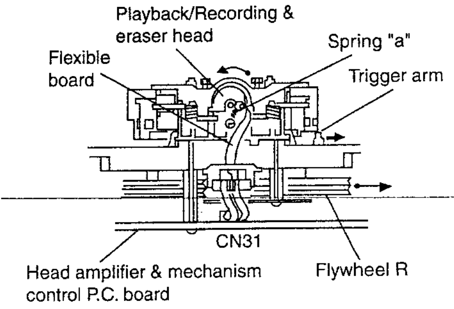
1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction,turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig 1).
2. When the flywheel R is rotated in counterclockwise direction, the playback head will be turned in counterclockwise direction from the position in Fig 2 to that in Fig 3.
3. At this position, disconnect the flexible P.C.board (outgoing from the playback head) from the connector CN301 on the head amp. and mechanism control P.C. board.
4. After dismounting the FPC holder,remove the flexible P.C.board.
5. Remove the flexible P.C.board from the chassis base.
6. Remove the spring "a" from behind the playback head.
7. Loosen the reversing azimuth screw retaining the playback head.
8. Take out the playback head from the front of the head mount.
9. The recording and eraser heads should also be removed similarly according to Steps 1~8 above.

● Reassembling the Playback, Recording and Eraser Heads

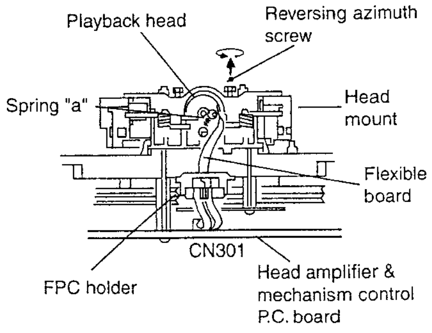
1. Reassemble the playback head from the front of the head mount to the position as shown in Fig 3.
2. Fix the reversing azimuth screw.
3. Set the spring a from behind the playback head.
4. Attach the flexible P.C.board to the chassis base, and fix it with the FPC holder as shown in Fig 3.
5. The recording and eraser heads should also be reassembled similarly according to Steps 1~4 above.


Cassette mechanism
Flywheel R
Head mount
Trigger arm

(Mechanism A side)


Playback/Recording & eraser head
Spring "a"
Flexible board
Trigger arm
CN31
Head amplifier & mechanism control P.C. board
Flywheel R

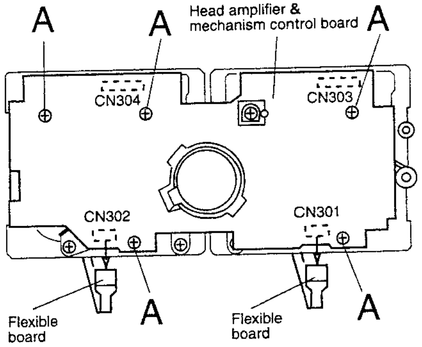
(Mechanism A side)


Playback head
Reversing azimuth screw
Spring "a"
Head mount
Flexible board
CN301
FPC holder
Head amplifier & mechanism control P.C. board

(Mechanism B side)

■ Removing the head Amp.and Mechanism Control P.C.Board (See Fig 4)

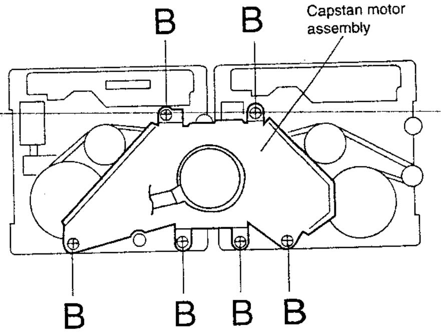
1. Remove the cassette mechanism assembly.
2. After turning over the cassette mechanism assembly,remove the five screws "A" retaining the head amp. and mechanism control P.C. board
3. Disconnect the connectors CN303 and CN304 on the P.C.Board and the connectors CN1 on both the right and left side reel pulse P.C.Boards.
4. When necessary, remove the 4pin parallel wire soldered to the main motor

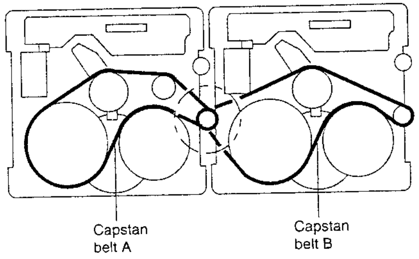

A
A
Head amplifier & mechanism control board
A
CN304
CN303
CN302
CN301
Flexible board
A
Flexible board
A

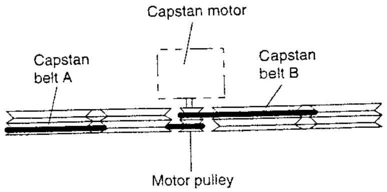
■ Removing the Capstan Motor Assembly

1. Remove the six screws "B" retaining capstan motor assembly (See Fig 5).
2. While raising the capstan motor, remove the capstan belts A and B respectively from the motor pulley (See Fig 6).

Caution 1: Be sure to handle the capstan belts so carefully that these belts will not be stained by grease and other foreign matter. Moreover, these belts should be hand while referring to the capstan belt hanging method.

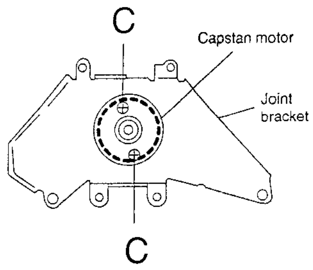

B
B
Capstan motor assembly
B
B
B
B


Capstan belt A
Capstan belt B


Capstan motor
Capstan belt A
Capstan belt B
Motor pulley

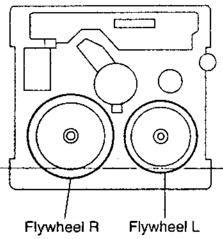
■Removing the Capstan Motor (See Fig 8)

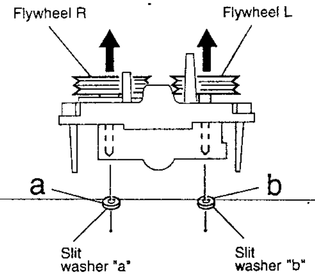
From the joint bracket, remove the two screws "C" retaining the capstan motor.


C
Capstan motor
Joint bracket
C

■Removing the Flywheel (See Fig 9.10)

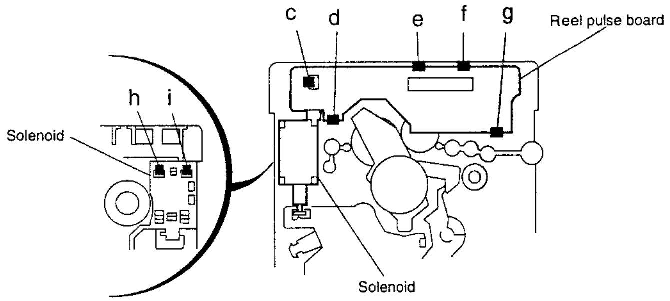
1.Remove the head amp. and mechanism control P.C.Board.
2.Remove the capstan motor assembly.
3.After turning over the cassette mechanism, remove the slit washers "a" and "b" fixing the capstan shafts R and L, and pull out the flywheels R and L respectively from behind the cassette mechanism.


Flywheel R
Flywheel L

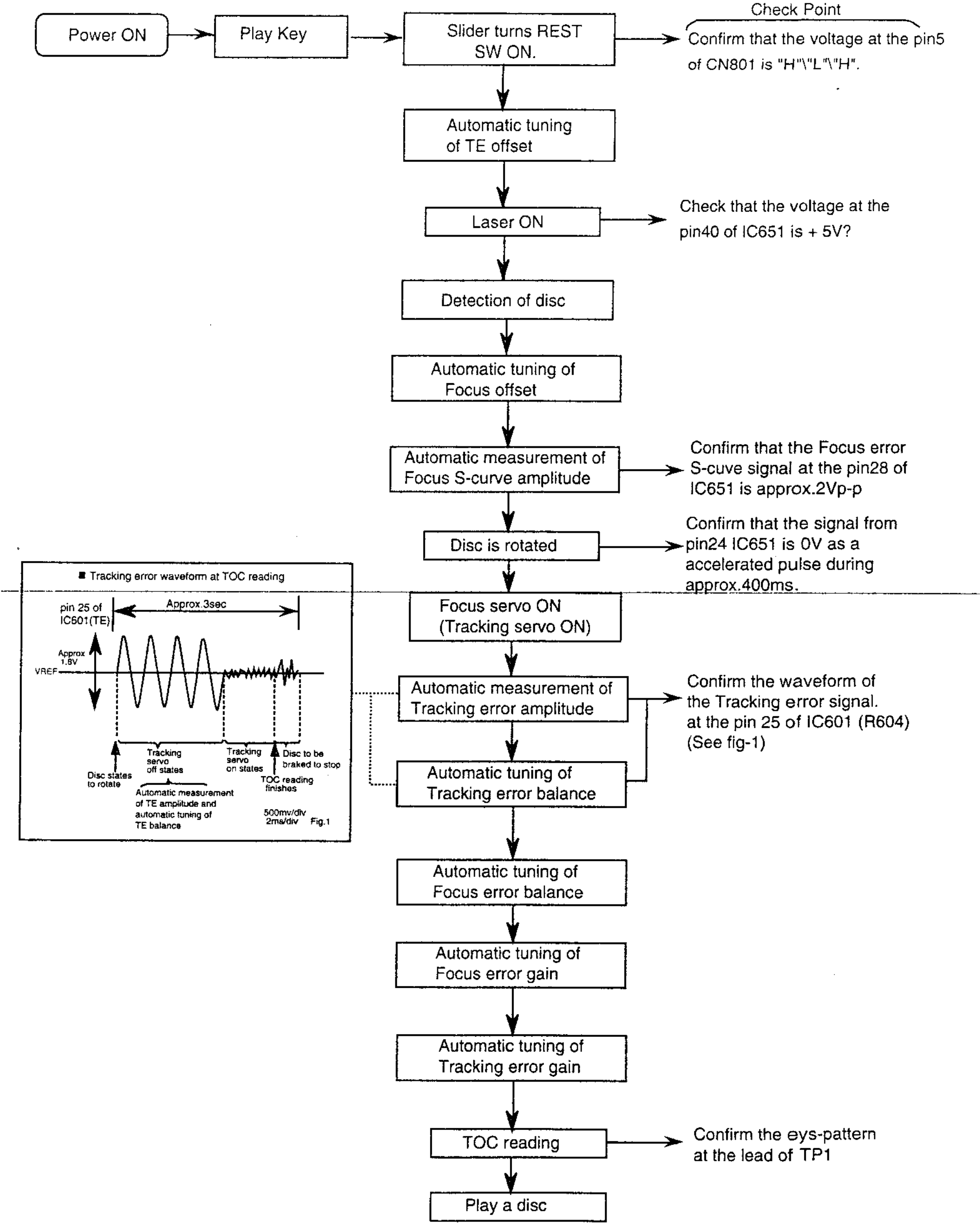

Flywheel R
Flywheel L
a
b
Slit washer "a"
Slit washer "b"

■Removing the Reel Pulse P.C.Board and Solenoid (See Fig 11)

1.Remove the five pawls (c,d,e,f,g) retaining the reel pulse P.C.Board.
2.From the surface of the reel pulse P.C.Board parts, remove the two pawls "h" and "i" retaining the solenoid.


c
d
e
f
g
Reel pulse board
h
i
Solenoid
Solenoid

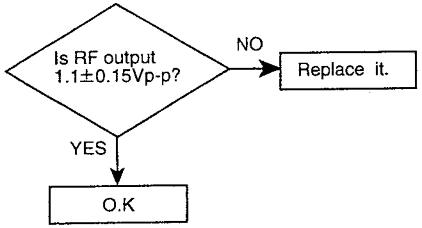
Flow of functional operation until TOC read


Check Point
Power ON
Play Key
Slider turns REST SW ON.
Confirm that the voltage at the pin5 of CN801 is "H"\"L"\"H".
Automatic tuning of TE offset
Laser ON
Check that the voltage at the pin40 of IC651 is + 5V?
Detection of disc
Automatic tuning of Focus offset
Automatic measurement of Focus S-curve amplitude
Confirm that the Focus error S-cuve signal at the pin28 of IC651 is approx.2Vp-p
Disc is rotated
Confirm that the signal from pin24 IC651 is 0V as a accelerated pulse during approx.400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Automatic tuning of Tracking error balance
Confirm the waveform of the Tracking error signal. at the pin 25 of IC601 (R604) (See fig-1)
Automatic tuning of Focus error balance
Automatic tuning of Focus error gain
Automatic tuning of Tracking error gain
TOC reading
Confirm the eys-pattern at the lead of TP1
Play a disc
■ Tracking error waveform at TOC reading
pin 25 of IC601(TE)
Approx.3sec
Approx 1.8V
VREF
Disc states to rotate
Tracking servo off states
Automatic measurement of TE amplitude and automatic tuning of TE balance
Tracking servo on states
TOC reading finishes
Disc to be braked to stop
500mv/div 2ms/div
Fig.1

Maintenance of laser pickup

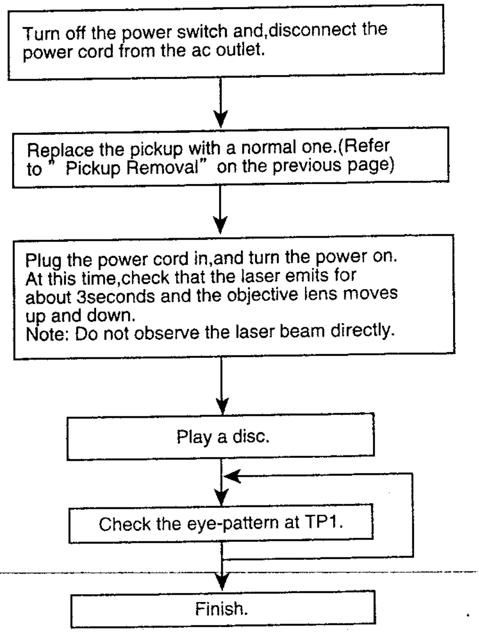
(1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.
(1) The level of RF output (EFM output:amplitude of eye pattern) will below.



(3) Semi-fixed resistor on the APC PC board The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

Replacement of laser pickup


Turn off the power switch and,disconnect the power cord from the ac outlet.

Replace the pickup with a normal one.(Refer to " Pickup Removal" on the previous page)

Plug the power cord in,and turn the power on. At this time,check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.

Adjustment method

Measurement Instruments Required for Adjustment

1. Low frequency oscillator,
   This oscillator should have a capacity to output 0dBs to 600Ω at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600Ω
3. Electronic voltmeter
4. Frequency counter
5. Wow flutter meter
6. Test tape
   VTT712 : For Tape speed and wow flutter (3kHz)
   VTT724 : For Reference level (1kHz)
   TMT7036 : For Head angle(10kHz),Play back frequency characteristics(1kHz),and dubbing frequency characteristics(63,1,10kHz)
   Because of frequency-mixed tape with 63,1k,10k and 14kHz(250nWb/m -24dB).
   Use this tape together with a filter.
7. Blank tape
   TAPE Ⅰ : AC-225, TAPE Ⅱ : AC-514
8. Torque gauge : For play and back tension
   Forward ; TW2111A, Reverse ; TW2121A
   Fast Forward and Rewind ; TW2231A
9. Test disc
   : CTS-1000(12cm),GRG-1211(8cm)
10. Jitter meter

Measurement Conditions

Power supply voltage
AC230V : (50Hz)

Measurement
output terminal : Speaker out
:TP101(Mesuring for TUNER/DECK/CD)
:Dummy load 6 ohm

Radio input signal
AM modulation frequency : 400Hz
Modulation factor : 30%
FM modulation frequency : 400Hz
Frequency displacement : 22.5kHz

Frequency Range

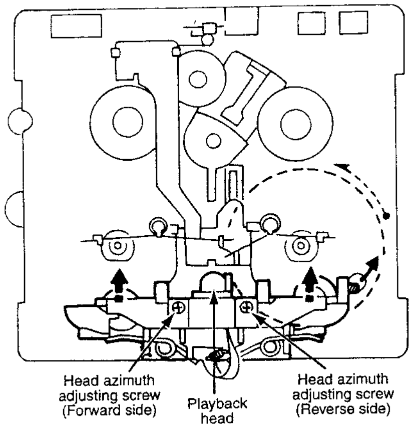
AM	522kHz~1629kHz
LW	144kHz~288kHz
FM	87.5MHz~108MHz except Ver.EE 65~74/87.5~108MHz only Ver.EE

Standard measurement positions of volume and switch
Power : Standby (Light STANDBY Indicator)
SA-Bass : OFF
Sound mode : OFF
Main VOL. : 0 Minimum
Travers mecha set position : Disc 1

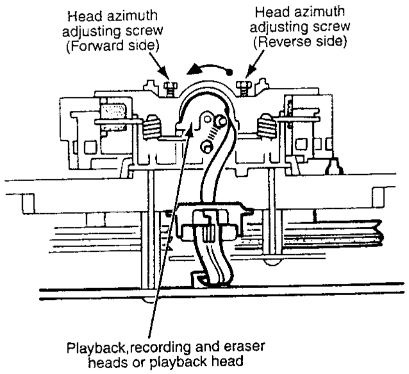
Precautions for Measurement
1. Apply 30pF and 33kΩ to the IF sweeper output side and 0.082μF and 100kΩ in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MPX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly.
7. In the case of BTL connection amplifier, the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an OTL system.

Arrangement of Adjusting Positions

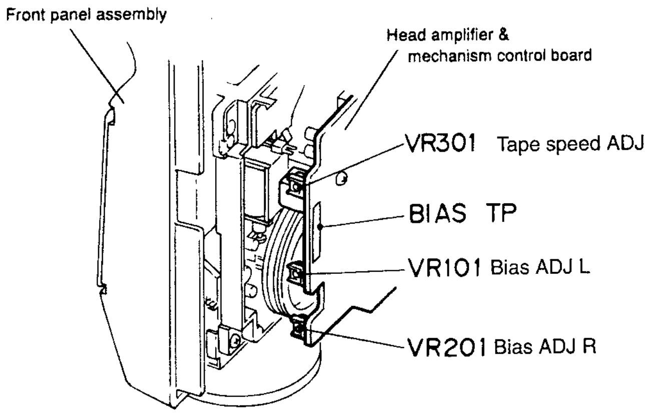
Cassette mechanism section (Mechanism A section)


Head azimuth adjusting screw (Forward side)
Playback head
Head azimuth adjusting screw (Reverse side)

Cassette mechanism section (Back side)


Head azimuth adjusting screw (Forward side)
Head azimuth adjusting screw (Reverse side)
Playback,recording and eraser heads or playback head

Cassette Mechanism Unit Section


Front panel assembly
Head amplifier & mechanism control board
VR301 Tape speed ADJ
BIAS TP
VR101 Bias ADJ L
VR201 Bias ADJ R

Tape Recorder Section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistor:3Ω) :Headphone terminal	1.Playback the test tape TMT7036(10kHz). 2.With the playback mechanism or recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum.After adjustment,lock the head azimuth at least by half a turn. 3.In either case,this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape :VTT712(3kHz) or TMT7036(3kHz) Measurement output terminal :Headphone terminal	<Constant speed> Adjust VR301 so that the frequency counter reading becomes 3,000Hz±60Hz when playing back the test tape VTT712(3kHz)with the playback mechanism or playback and recording mechanism after ending forward winding of the tape.	Tape speed of decks (A and B) :3,000Hz ±60Hz	VR301

Reference Values for Confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Double tape speed	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistance:3Ω) measurement output terminal :Headphone terminal	After setting to the double speed motor, confirm that the frequency counter reading becomes 4,800+400/-300Hz when the test tape VTT712 (3kHz) has been play back with the playback mechanism.	4,800+400/ -300Hz	Playback mechanism side
Difference between the forward and reverse speed. P.mecha and R/P mecha speed		When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	60Hz or less	Both the playback and recording & playback mechanism
Wow & flutter	Test tape :TMT7036(10kHz) Measurement output terminal :Headphone terminal	When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding the frequency counter reading of wow & flutter should be 0.25% or less(WRMS).	with in 0.25% JIS(WTD)	Both the playback and recording & playback mechanism

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	*Mode : Forward or reverse mode *Recording mode *Test tape :AC-514 and AC-225 Measurement output terminal :Both recording and headphone terminals	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing conditions in advance. 2.After connecting 100Ω in series to the recorder head,measure the bias current with a valve voltmeter at both of the terminals. 3.After resetting the [PAUSE] mode,start recording. At this time,adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0μA (TYP Ⅰ) and 4.20μA(TYP Ⅱ).	AC-225 :4.20μA AC-514 :4.0μA	LcH :VR101 RcH :VR201
Adjustment of recording and playback frequency characteristics	Reference frequency :1kHz and 10kHz (REF:-20dB) Test tape :TYP Ⅱ AC-514 Measurement input terminal :OSC IN	1.With the recording and playback mechanism,load the test tape(AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing condition in advance. 2.While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the test tape. 3.While recording and playing back the test tape in TYP Ⅱ,adjust VR101 for LcH and VR201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kH :-1dB±2dB	LcH :VR101 RcH :VR201

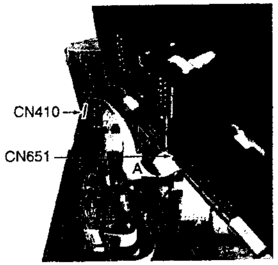
■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Recording bias frequency	*Recording and playback side forward or reverse *Test tape :TYP Ⅱ AC-514 *Measurement terminal BIAS TP on P.C.board	1.While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. 2.With the recording and playback mechanism. load the test tape (AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing conditions in advance. 3.Confirm that the BIAS TP frequency on the P.C.board is 100kHz±6kHz.	100kHz +9kHz -7kHz	
Eraser current (Reference value)	*Recording and playback side forward or reverse *Recording mode *Test tape :AC-514 and AC-225 Measurement terminal Both of the eraser head	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing condition in advance. 2.After setting to the recording conditions,connect 1MΩ in series to the eraser head on the recording and playback mechanism side,and measure the eraser current from both of the eraser terminal.	TYP Ⅱ :120mA TYP Ⅰ :75mA	

Diagnosis which uses extension wire method

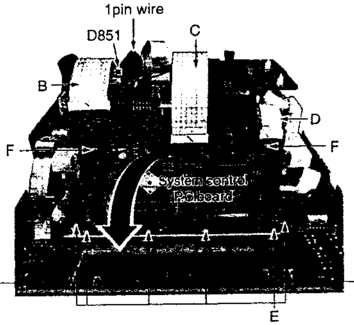
CD Changer mechanism

1.Remove the top cover and CD changer mechanism.
2.The extension wire "A" is connected with CN651 and CN410.



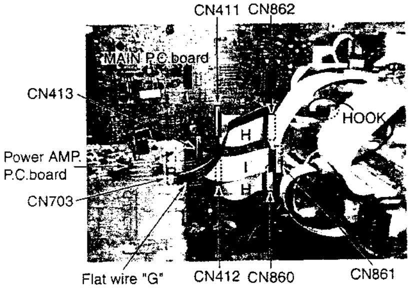
System control P.C.board

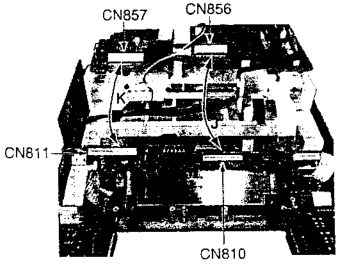
1.Remove the top cover and CD changer mechanism.
2.Remove the front panel assembly.
3.Disconnect the card wire "B","C","D".
4.The 1pin wire is removed from D851
5.Six screws "E" are removed, and the bracket is removed.
6.Two screws "F" on the system control P.C.board are removed, and the system control P.C.board is knocked down forward.
7.The flat wire "G" is connected with CN703 on the Power AMP.P.C.board while remove flat wire "G" from the hook, and extended.
8.Two extension wires "H" are connected with CN860, CN412, and CN862, CN411 respectively.
9.The extension wire "I" is connected with CN861 and CN413.
10.The extension wire "J" is connected with CN856 and CN810.
11.The extension wire "K" is connected with CN857 and CN811.
12.The extension wire "L" is connected with CN306 and CN812.

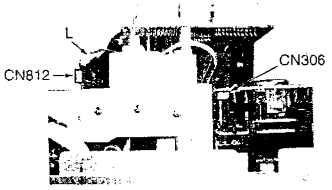


Extension wire parts No.

A : VWF1019-45TTA
H : QUQ412-2140CJ
I : QUQ412-1738CJ
J : QUQ412-2120CJ
K : VWF1223-30TTB
L : VWF1211-28TTB







Right side

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	*Mode : Forward or reverse mode *Recording mode *Test tape :AC-514 and AC-225 Measurement output terminal :Both recording and headphone terminals	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing conditions in advance. 2.After connecting 100Ω in series to the recorder head,measure the bias current with a valve voltmeter at both of the terminals. 3.After resetting the [PAUSE] mode,start recording. At this time,adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0μA (TYP Ⅰ) and 4.20μA(TYP Ⅱ).	AC-225 :4.20μA AC-514 :4.0μA	LcH :VR101 RcH :VR201
Adjustment of recording and playback frequency characteristics	Reference frequency :1kHz and 10kHz (REF:-20dB) Test tape :TYP Ⅱ AC-514 Measurement input terminal :OSC IN	1.With the recording and playback mechanism,load the test tape(AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing condition in advance. 2.While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the test tape. 3.While recording and playing back the test tape in TYP Ⅱ,adjust VR101 for LcH and VR201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kH :-1dB±2dB	LcH :VR101 RcH :VR201

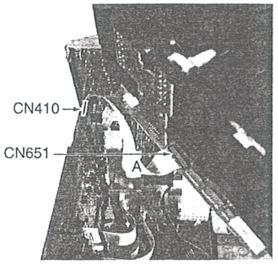
■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Recording bias frequency	*Recording and playback side forward or reverse *Test tape :TYP Ⅱ AC-514 *Measurement terminal BIAS TP on P.C.board	1.While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. 2.With the recording and playback mechanism. load the test tape (AC-514 to TYP Ⅱ),and set the mechanism to the recording and pausing conditions in advance. 3.Confirm that the BIAS TP frequency on the P.C.board is 100kHz±6kHz.	100kHz +9kHz -7kHz	
Eraser current (Reference value)	*Recording and playback side forward or reverse *Recording mode *Test tape :AC-514 and AC-225 Measurement terminal Both of the eraser head	1.With the recording and playback mechanism, load the test tapes(AC-514 to TYP Ⅱ and AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing condition in advance. 2.After setting to the recording conditions,connect 1MΩ in series to the eraser head on the recording and playback mechanism side,and measure the eraser current from both of the eraser terminal.	TYP Ⅱ :120mA TYP Ⅰ :75mA	

Diagnosis which uses extension wire method

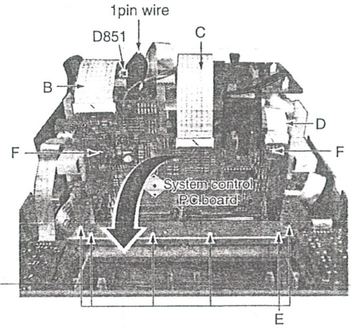
CD Changer mechanism

1.Remove the top cover and CD changer mechanism.
2.The extension wire "A" is connected with CN651 and CN410.



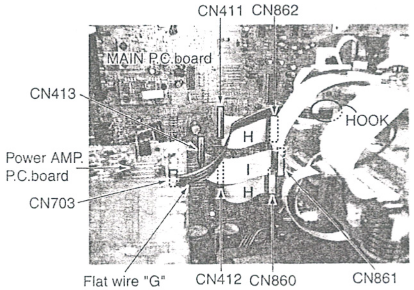
System control P.C.board

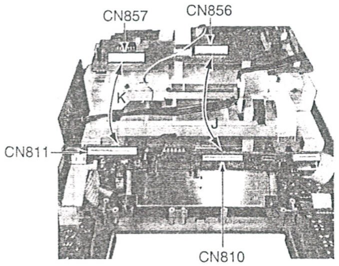
1.Remove the top cover and CD changer mechanism.
2.Remove the front panel assembly.
3.Disconnect the card wire "B","C","D".
4.The 1pin wire is removed from D851
5.Six screws "E" are removed, and the bracket is removed.
6.Two screws "F" on the system control P.C.board are removed, and the system control P.C.board is knocked down forward.
7.The flat wire "G" is connected with CN703 on the Power AMP.P.C.board while remove flat wire "G" from the hook, and extended.
8.Two extension wires "H" are connected with CN860, CN412, and CN862, CN411 respectively.
9.The extension wire "I" is connected with CN861 and CN413.
10.The extension wire "J" is connected with CN856 and CN810.
11.The extension wire "K" is connected with CN857 and CN811.
12.The extension wire "L" is connected with CN306 and CN812.

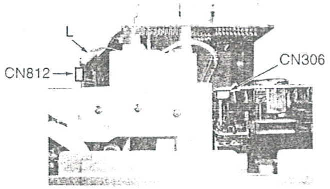


Extension wire parts No.

A : VWF1019-45TTA
H : QUQ412-2140CJ
I : QUQ412-1738CJ
J : QUQ412-2120CJ
K : VWF1223-30TTB
L : VWF1211-28TTB

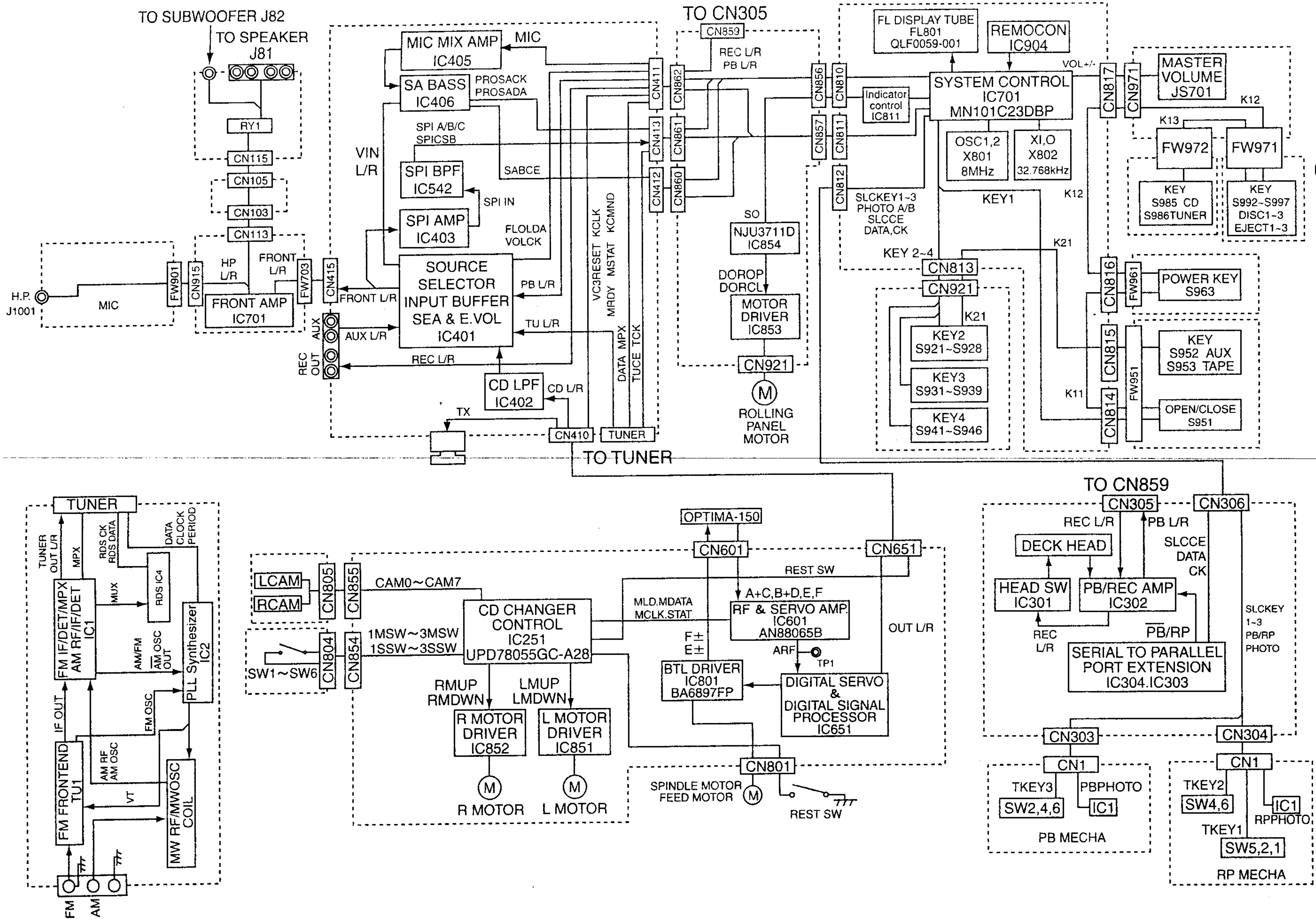






Right side

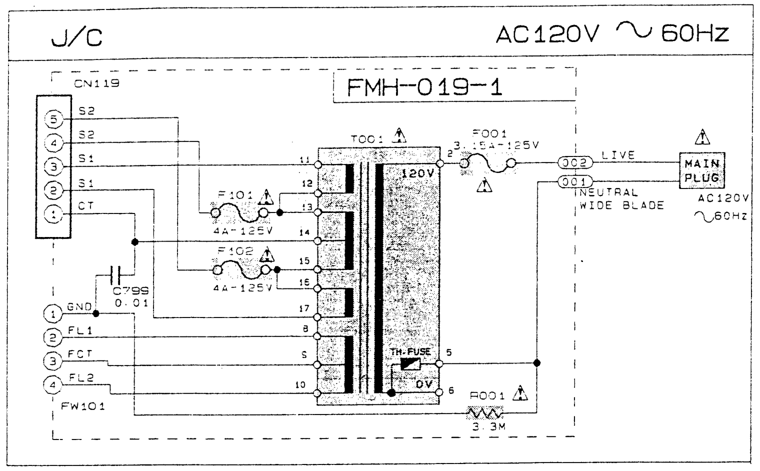
Block diagram


TO SUBWOOFER J82
TO SPEAKER J81
RY1
CN115
CN105
CN103
CN113
H.P. J1001
MIC
FW901
CN915
HP L/R
FRONT L/R
FRONT AMP IC701
FW703
CN415
FRONT L/R
AUX
REC OUT
AUX L/R
REC L/R
MIC MIX AMP IC405
MIC
SA BASS IC406
PROSACK
PROSADA
SPI A/B/C
SPICSB
VIN L/R
SPI BPF IC542
SABCE
SPI IN
SPI AMP IC403
FLOLDA
VOLCK
SOURCE SELECTOR INPUT BUFFER SEA & E.VOL IC401
PB L/R
TU L/R
CD LPF IC402
CD L/R
TX
VC3RESET KCLK KCMND
MRDY MSTAT
DATA MPX
TUCE TCK
CN411
CN413
CN412
CN410
TUNER
TO TUNER
TO CN305
CN859
REC L/R
PB L/R
CN862
CN861
CN860
SO
NJU3711D IC854
DOROP
DORCL
MOTOR DRIVER IC853
CN921
ROLLING PANEL MOTOR
CN856
CN857
CN810
CN811
CN812
FL DISPLAY TUBE FL801 QLF0059-001
REMOCON IC904
Indicator control IC811
SYSTEM CONTROL IC701 MN101C23DBP
OSC1,2 X801 8MHz
XI,O X802 32.768kHz
VOL+/-
KEY1
SLCKEY1~3
PHOTO A/B
SLCCE
DATA,CK
KEY 2~4
CN813
CN921
K21
KEY2 S921~S928
KEY3 S931~S939
KEY4 S941~S946
K12
K21
K11
CN817
CN971
MASTER VOLUME JS701
K13
K12
FW972
FW971
KEY S985 CD S986TUNER
KEY S992~S997 DISC1~3 EJECT1~3
CN816
FW961
POWER KEY S963
CN815
FW951
KEY S952 AUX S953 TAPE
CN814
OPEN/CLOSE S951
TUNER
TUNER OUT L/R
MPX
RDS CK
RDS DATA
DATA CLOCK PERIOD
FM IF/DET/MPX AM RF/IF/DET IC1
MUX
RDS IC4
AM/FM
AM OSC OUT
PLL Synthesizer IC2
IF OUT
FM OSC
FM FRONTEND TU1
AM RF AM OSC
VT
MW RF/MWOSC COIL
FM
AM
OPTIMA-150
CN601
CN651
LCAM
RCAM
CN805
CN855
CAM0~CAM7
REST SW
A+C,B+D,E,F
CD CHANGER CONTROL IC251 UPD78055GC-A28
MLD.MDATA
MCLK.STAT
RF & SERVO AMP. IC601 AN88065B
SW1~SW6
CN804
CN854
1MSW~3MSW
1SSW~3SSW
F±
E±
ARF
TP1
OUT L/R
BTL DRIVER IC801 BA6897FP
DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR IC651
RMUP
RMDWN
LMUP
LMDWN
R MOTOR DRIVER IC852
L MOTOR DRIVER IC851
R MOTOR
L MOTOR
CN801
SPINDLE MOTOR
FEED MOTOR
REST SW
TO CN859
CN305
CN306
REC L/R
PB L/R
DECK HEAD
SLCCE
DATA
CK
HEAD SW IC301
PB/REC AMP IC302
REC L/R
PB/RP
SLCKEY 1~3
PB/RP
PHOTO
SERIAL TO PARALLEL PORT EXTENSION IC304.IC303
CN303
CN304
CN1
TKEY3
PBPHOTO
SW2,4,6
IC1
PB MECHA
CN1
TKEY2
SW4,6
IC1
RPPHOTO
TKEY1
SW5,2,1
RP MECHA

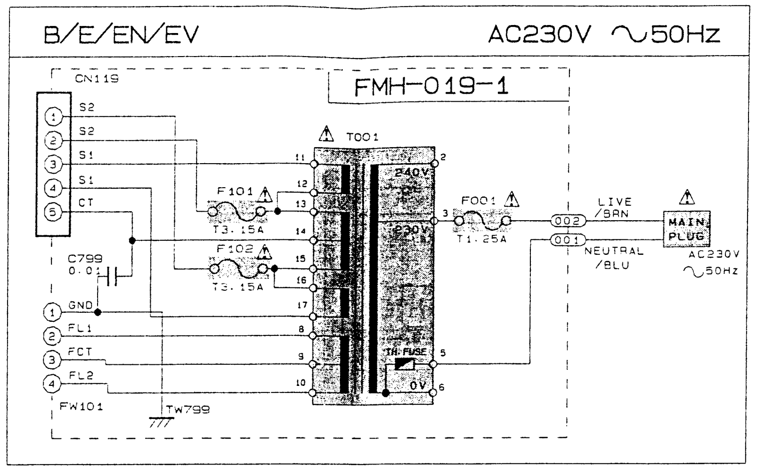
Schematic Diagrams

■ Power Transformer Section

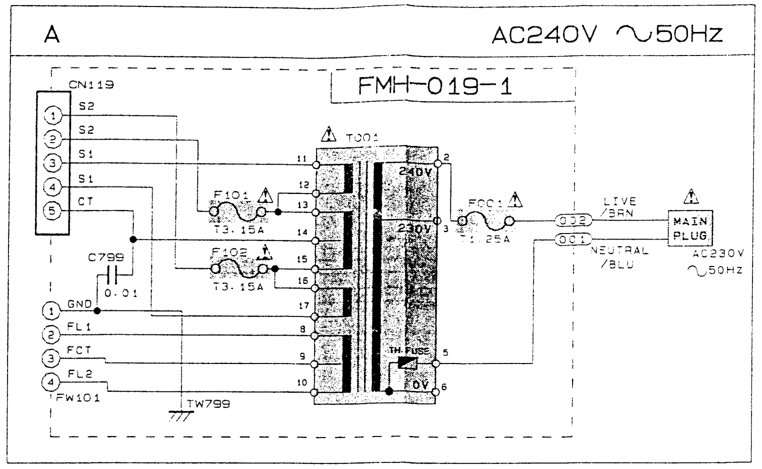
POWER SUPPLY BLOCK


J/C
AC120V ∿ 60Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
T001 ⚠
F001 3.15A-125V
F101 ⚠ 4A-125V
F102 ⚠ 4A-125V
120V
C799 0.01
GND
FL1
FCT
FL2
FW101
TH-FUSE
0V
R001 ⚠ 3.3M
002 LIVE
001 NEUTRAL WIDE BLADE
MAIN PLUG
AC120V ∿60Hz

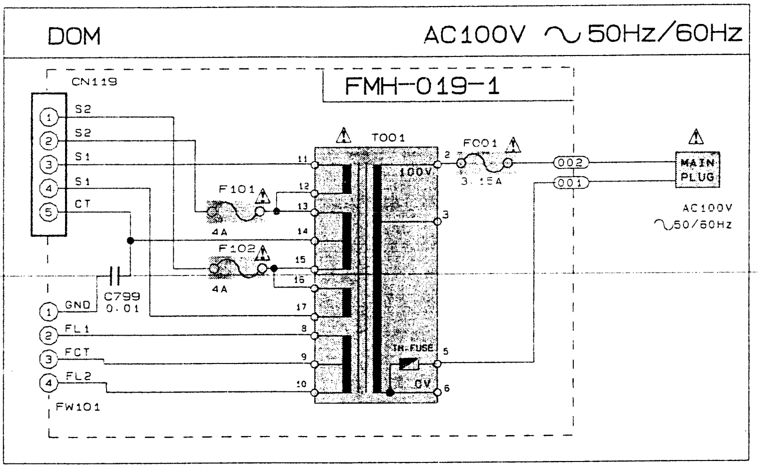
POWER SUPPLY BLOCK


B/E/EN/EV
AC230V ∿50Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
⚠ T001
240V
230V
F101 ⚠ T3.15A
F102 ⚠ T3.15A
F001 ⚠ T1.25A
C799 0.01
GND
FL1
FCT
FL2
FW101
TW799
TH-FUSE
0V
002 LIVE /BRN
001 NEUTRAL /BLU
MAIN PLUG
AC230V ∿50Hz

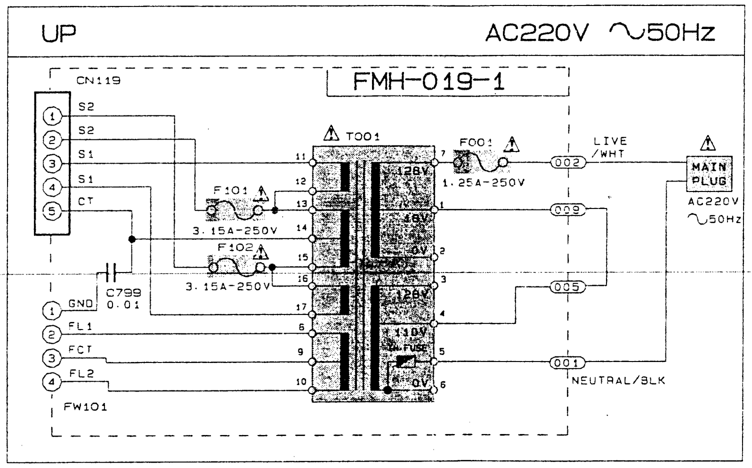
POWER SUPPLY BLOCK


A
AC240V ∿50Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
⚠ T001
240V
230V
F101 ⚠ T3.15A
F102 ⚠ T3.15A
F001 ⚠ T1.25A
C799 0.01
GND
FL1
FCT
FL2
FW101
TW799
TH-FUSE
0V
002 LIVE /BRN
001 NEUTRAL /BLU
MAIN PLUG
AC230V ∿50Hz

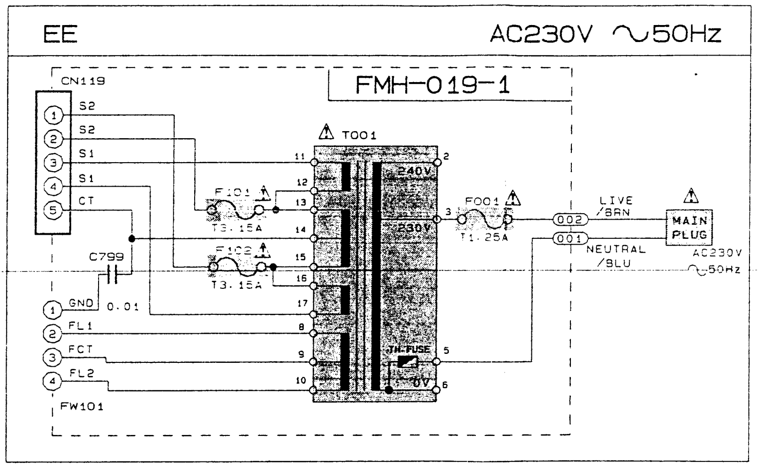
POWER SUPPLY BLOCK


DOM
AC100V ∿ 50Hz/60Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
⚠ T001
100V
F001 ⚠ 3.15A
F101 ⚠ 4A
F102 ⚠ 4A
C799 0.01
GND
FL1
FCT
FL2
FW101
TH-FUSE
0V
002
001
MAIN PLUG
AC100V ∿50/60Hz

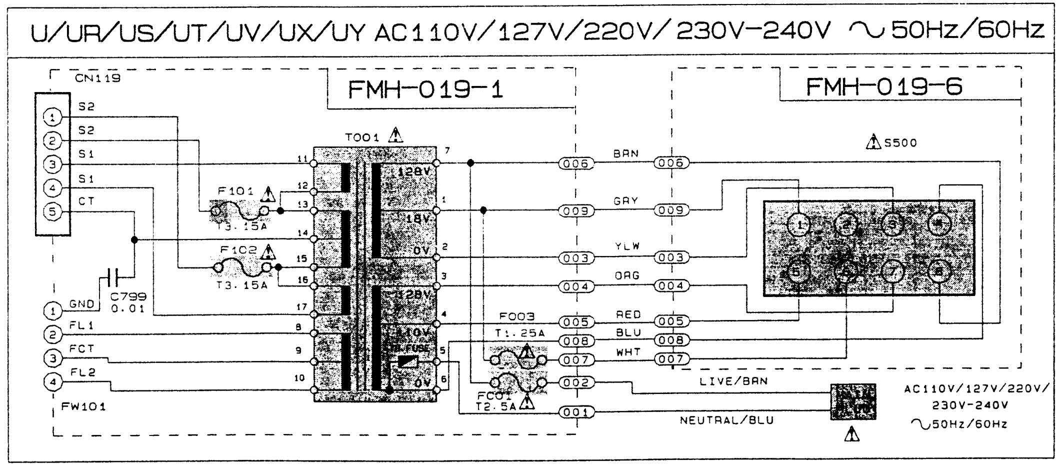
POWER SUPPLY BLOCK


UP
AC220V ∿50Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
⚠ T001
128V
18V
0V
110V
F001 ⚠ 1.25A-250V
F101 ⚠ 3.15A-250V
F102 ⚠ 3.15A-250V
C799 0.01
GND
FL1
FCT
FL2
FW101
TH-FUSE
0V
002 LIVE /WHT
003
005
001 NEUTRAL/BLK
MAIN PLUG
AC220V ∿50Hz

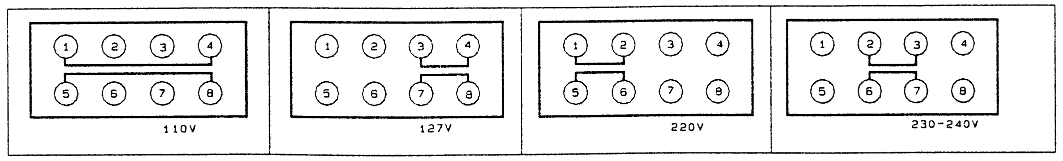
POWER SUPPLY BLOCK


EE
AC230V ∿50Hz
CN119
FMH-019-1
S2
S2
S1
S1
CT
⚠ T001
240V
230V
F101 ⚠ T3.15A
F102 ⚠ T3.15A
F001 ⚠ T1.25A
C799 0.01
GND
FL1
FCT
FL2
FW101
TH-FUSE
0V
002 LIVE /BRN
001 NEUTRAL /BLU
MAIN PLUG
AC230V ∿50Hz

POWER SUPPLY BLOCK


U/UR/US/UT/UV/UX/UY AC110V/127V/220V/230V-240V ∿50Hz/60Hz
CN119
FMH-019-1
FMH-019-6
S2
S2
S1
S1
CT
T001 ⚠
128V
18V
0V
128V
110V
TH-FUSE
0V
F101 ⚠ T3.15A
F102 ⚠ T3.15A
F003 T1.25A
F001 T2.5A ⚠
C799 0.01
GND
FL1
FCT
FL2
FW101
⚠S500
006 BRN
009 GRY
003 YLW
004 ORG
005 RED
008 BLU
007 WHT
002 LIVE/BRN
001 NEUTRAL/BLU
AC110V/127V/220V/230V-240V ∿50Hz/60Hz
⚠

VOLTAGE SELECTOR LOCATION


1
2
3
4
5
6
7
8
110V
127V
220V
230-240V

SHEET NUMBER	MODEL NUMBERS TO BE APPLIED	CIRCUITS DESCRIPTION
1/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.PRIMARY WITH MAINS TRANSFORMER
2/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.DC REGULATORS/AUDIO OUTPUT
3/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.EXTERNAL INPUT. SOURCE SELECTOR SWITCH
4/11	MX-J50/MX-J56/CA-MXJ50	.TUNER RF/IF/FM MULTIPLEX (ONLY FOR J.C.U.UP.UR.US.UT.UV.UX.UY.A.DOM)
5/11	CA-MXJ55R/CA-MXJ530R	.TUNER RF/IF/FM MULTIPLEX (ONLY FOR B.E.EN.EV)
6/11	MX-J55R	.TUNER RF/IF/FM MULTIPLEX (ONLY FOR EE)
7/11	MX-J55R	.POLAR STEREO MULTIPLEX (ONLY FOR EE)
8/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.FL DISPLAY. SYSTEM CONTROL LSI. USER CONTROL KEYS
9/11	MX-J50	.MIC AMP. ECHO CIRCUIT (ONLY FOR U/UP/UR/US/UT/UV/UX/UY)
10/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.TAPE DECK MECHANISM CONTROL .TAPE CIRCUITS SUCH AS PRE-AMP AND BIAS
11/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	.CD SERVO AND CD SYSTEM CONTROL .CD CHANGER MECHANISM CONTROL

NOTES: MARK (*) IS TO SHOW DEVIATION IN VERSIONS.
DETAILS ARE EXPLAINED NEAR THE MARK.

MODEL
MX-J50/CA-MXJ50/CA-MXJ55R
CA-MXJ530R/MX-J55R/MX-J56

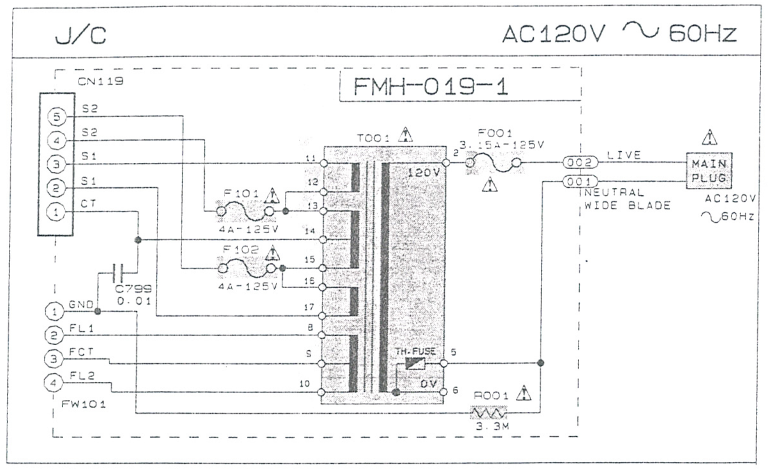
SHEET
1/11

▨ ⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

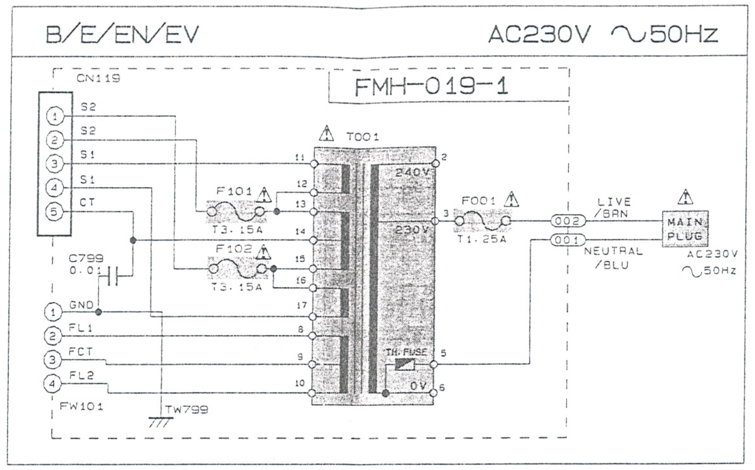
Schematic Diagrams

■ Power Transformer Section

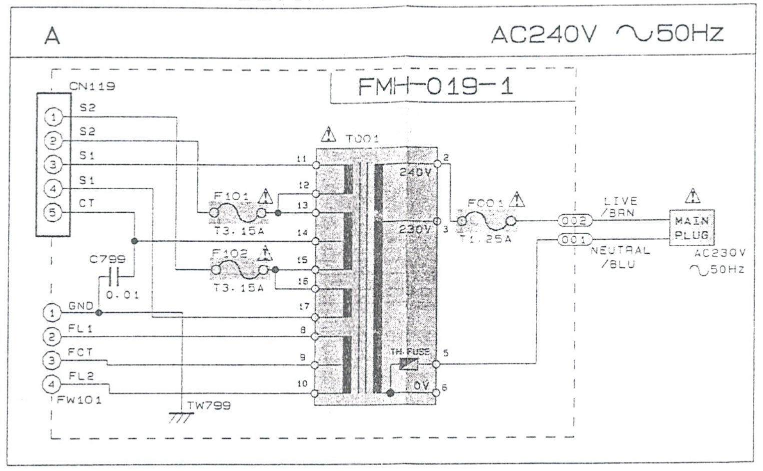
POWER SUPPLY BLOCK


J/C
AC120V ∿ 60Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
T001 ⚠
120V
F101 ⚠
4A-125V
F102 ⚠
4A-125V
F001
3.15A-125V
TH-FUSE
0V
R001 ⚠
3.3M
002
001
LIVE
NEUTRAL
WIDE BLADE
MAIN PLUG
AC120V
∿60Hz

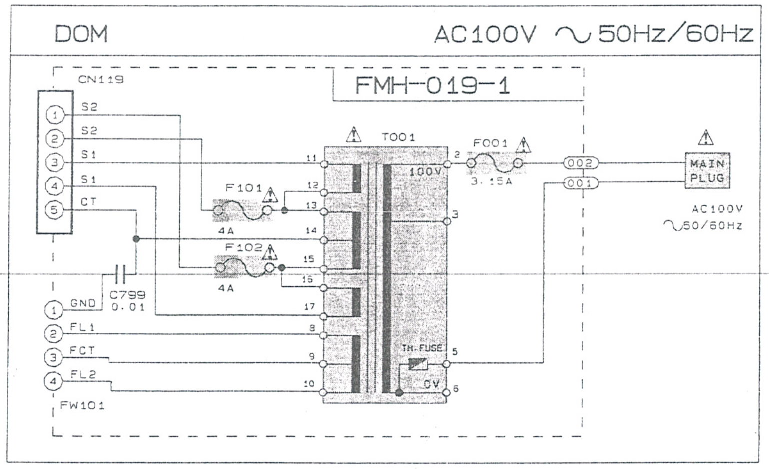
POWER SUPPLY BLOCK


B/E/EN/EV
AC230V ∿50Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
TW799
T001 ⚠
240V
230V
F101 ⚠
T3.15A
F102 ⚠
T3.15A
F001 ⚠
T1.25A
TH-FUSE
0V
002
001
LIVE
/BRN
NEUTRAL
/BLU
MAIN PLUG
AC230V
∿50Hz

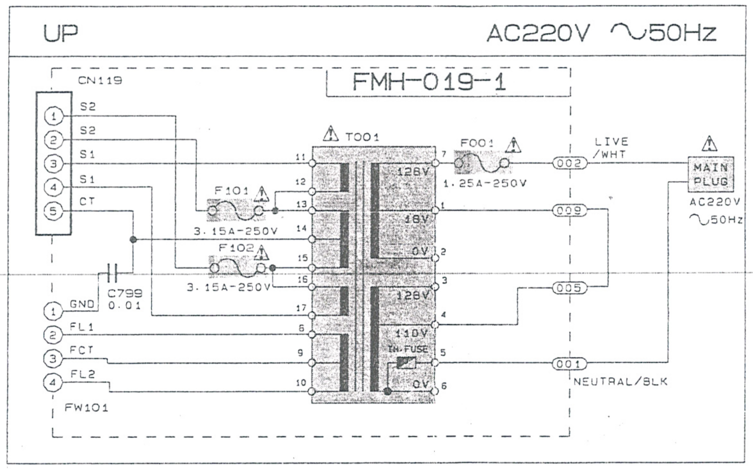
POWER SUPPLY BLOCK


A
AC240V ∿50Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
TW799
T001 ⚠
240V
230V
F101 ⚠
T3.15A
F102 ⚠
T3.15A
F001 ⚠
T1.25A
TH-FUSE
0V
002
001
LIVE
/BRN
NEUTRAL
/BLU
MAIN PLUG
AC230V
∿50Hz

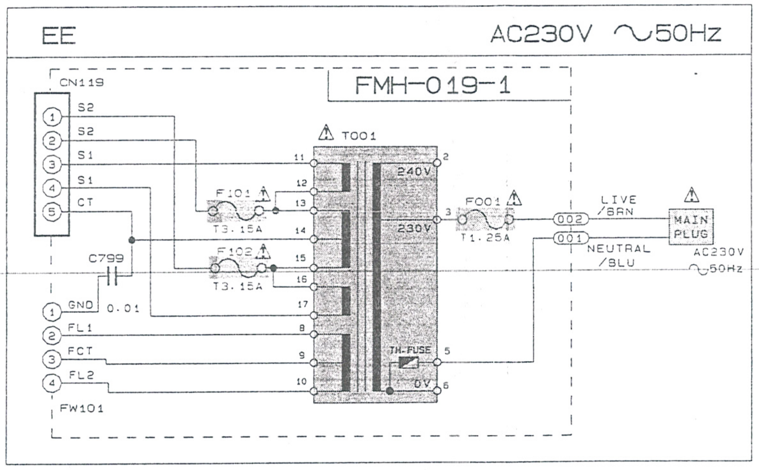
POWER SUPPLY BLOCK


DOM
AC100V ∿50Hz/60Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
T001 ⚠
100V
F101 ⚠
4A
F102 ⚠
4A
F001 ⚠
3.15A
TH-FUSE
0V
002
001
MAIN PLUG
AC100V
∿50/60Hz

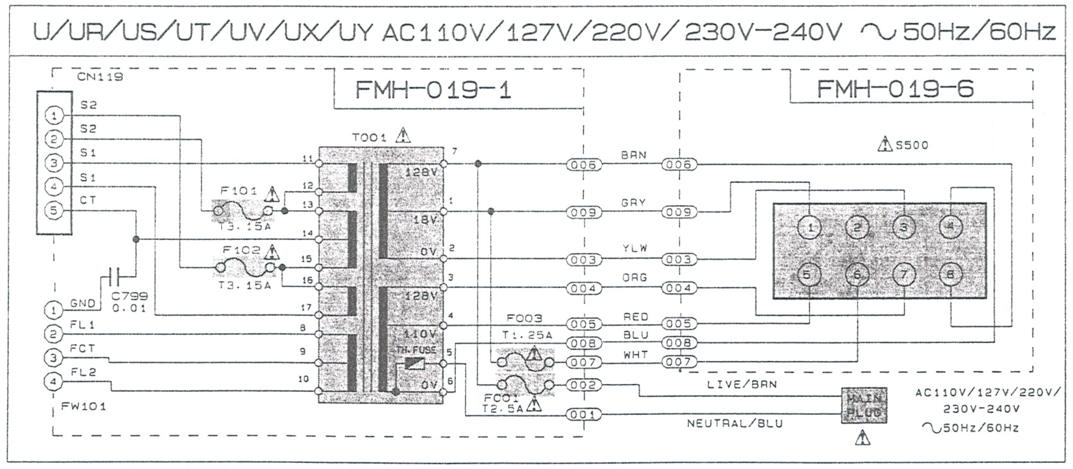
POWER SUPPLY BLOCK


UP
AC220V ∿50Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
T001 ⚠
128V
18V
0V
128V
110V
TH-FUSE
0V
F101 ⚠
3.15A-250V
F102 ⚠
3.15A-250V
F001 ⚠
1.25A-250V
002
009
005
001
LIVE
/WHT
NEUTRAL/BLK
MAIN PLUG
AC220V
∿50Hz

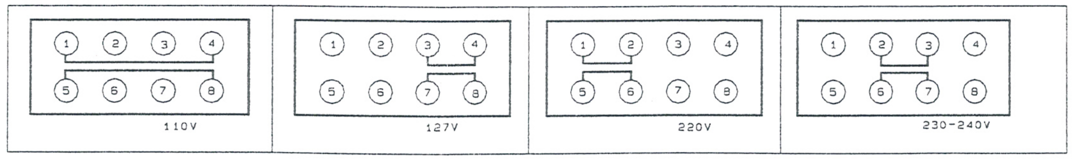
POWER SUPPLY BLOCK


EE
AC230V ∿50Hz
FMH-019-1
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
T001 ⚠
240V
230V
F101 ⚠
T3.15A
F102 ⚠
T3.15A
F001 ⚠
T1.25A
TH-FUSE
0V
002
001
LIVE
/BRN
NEUTRAL
/BLU
MAIN PLUG
AC230V
∿50Hz

POWER SUPPLY BLOCK


U/UR/US/UT/UV/UX/UY AC110V/127V/220V/ 230V-240V ∿50Hz/60Hz
FMH-019-1
FMH-019-6
CN119
S2
S2
S1
S1
CT
GND
FL1
FCT
FL2
FW101
C799
0.01
T001 ⚠
128V
18V
0V
128V
110V
TH-FUSE
0V
F101 ⚠
T3.15A
F102 ⚠
T3.15A
F003
T1.25A
F001
T2.5A ⚠
⚠S500
BRN
GRY
YLW
ORG
RED
BLU
WHT
006
009
003
004
005
008
007
002
001
LIVE/BRN
NEUTRAL/BLU
MAIN PLUG
AC110V/127V/220V/
230V-240V
∿50Hz/60Hz

VOLTAGE SELECTOR LOCATION


110V
127V
220V
230-240V

SHEET NUMBER	MODEL NUMBERS TO BE APPLIED	CIRCUITS DESCRIPTION
1/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. PRIMARY WITH MAINS TRANSFORMER
2/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. DC REGULATORS/AUDIO OUTPUT
3/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. EXTERNAL INPUT. SOURCE SELECTOR SWITCH
4/11	MX-J50/MX-J56/CA-MXJ50	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR J. C. U. UP. UR. US. UT. UV. UX. UY. A. DOM)
5/11	CA-MXJ55R/CA-MXJ530R	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR B. E. EN. EV)
6/11	MX-J55R	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR EE)
7/11	MX-J55R	. POLAR STEREO MULTIPLEX (ONLY FOR EE)
8/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. FL DISPLAY. SYSTEM CONTROL LSI. USER CONTROL KEYS
9/11	MX-J50	. MIC AMP. ECHO CIRCUIT (ONLY FOR U/UP/UR/US/UT/UV/UX/UY)
10/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. TAPE DECK MECHANISM CONTROL . TAPE CIRCUITS SUCH AS PRE-AMP AND BIAS
11/11	MX-J50/CA-MXJ50/MX-J56 CA-MXJ55R/MX-J55R/CA-MXJ530R	. CD SERVO AND CD SYSTEM CONTROL . CD CHANGER MECHANISM CONTROL

NOTES: MARK (*) IS TO SHOW DEVIATION IN VERSIONS.
DETAILS ARE EXPLAINED NEAR THE MARK.

MODEL
MX-J50/CA-MXJ50/CA-MXJ55R
CA-MXJ530R/MX-J55R/MX-J56

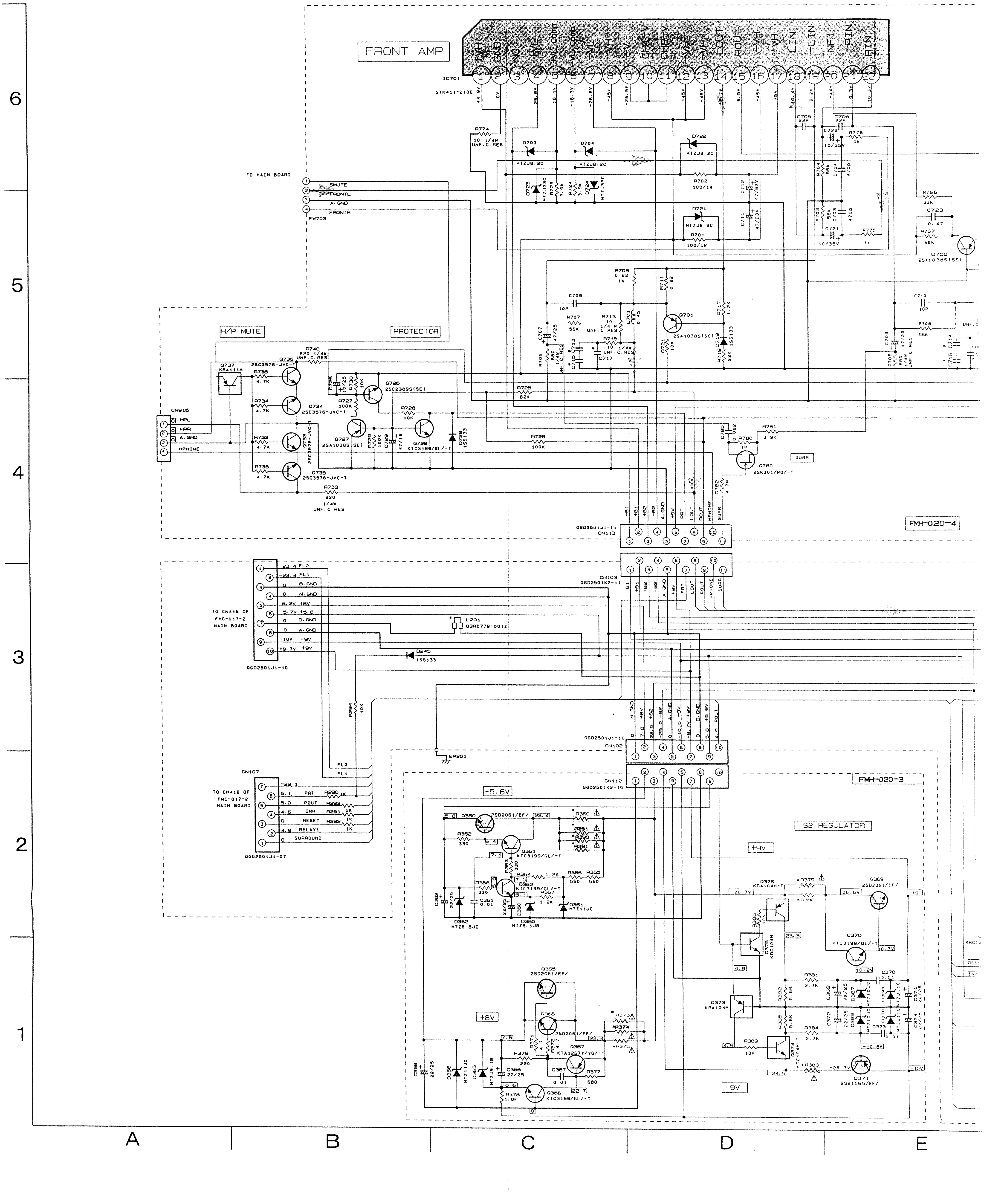
SHEET
1/11

▨ ⚠ Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

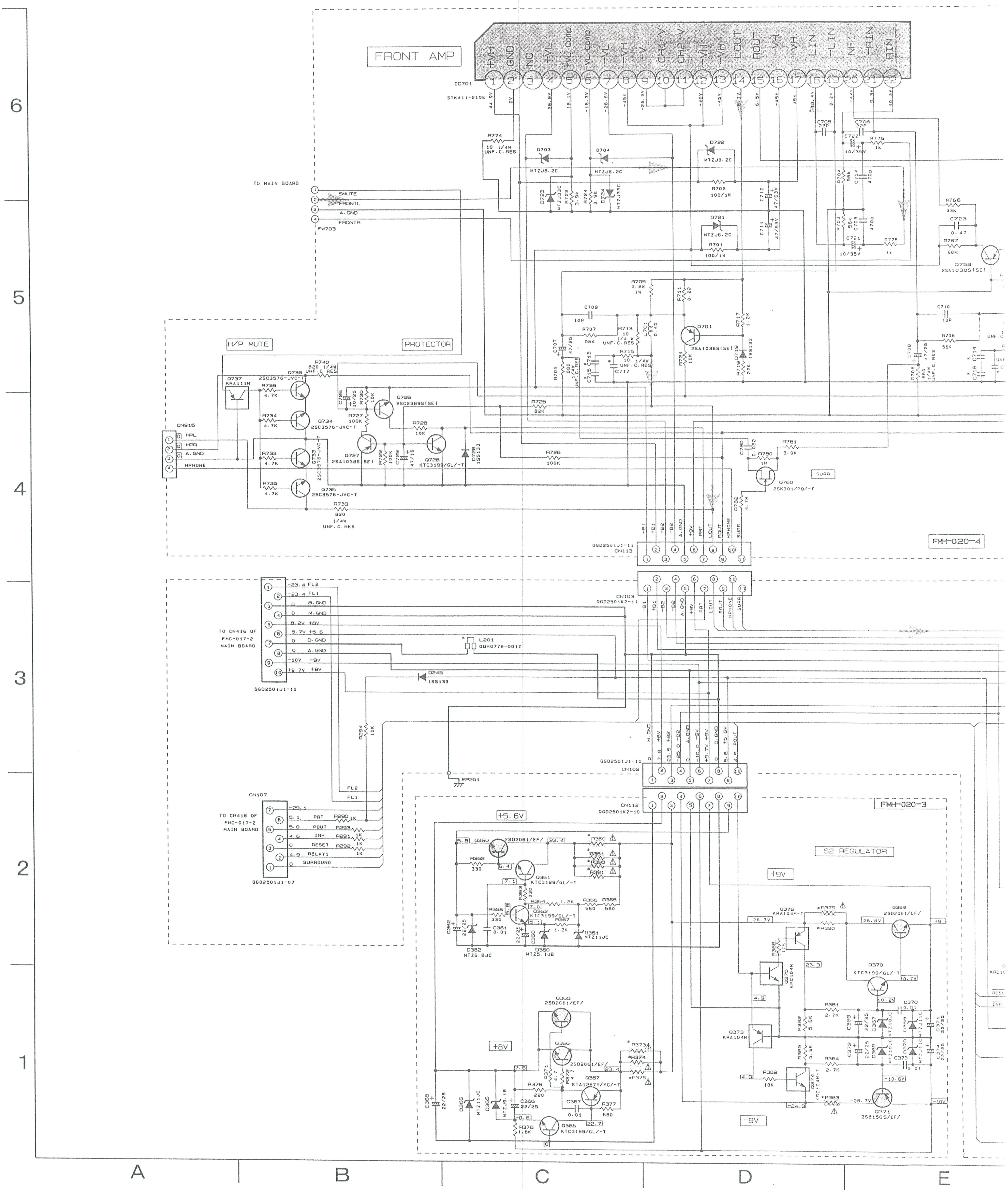
6
5
4
3
2
1

A B C D E F G H I

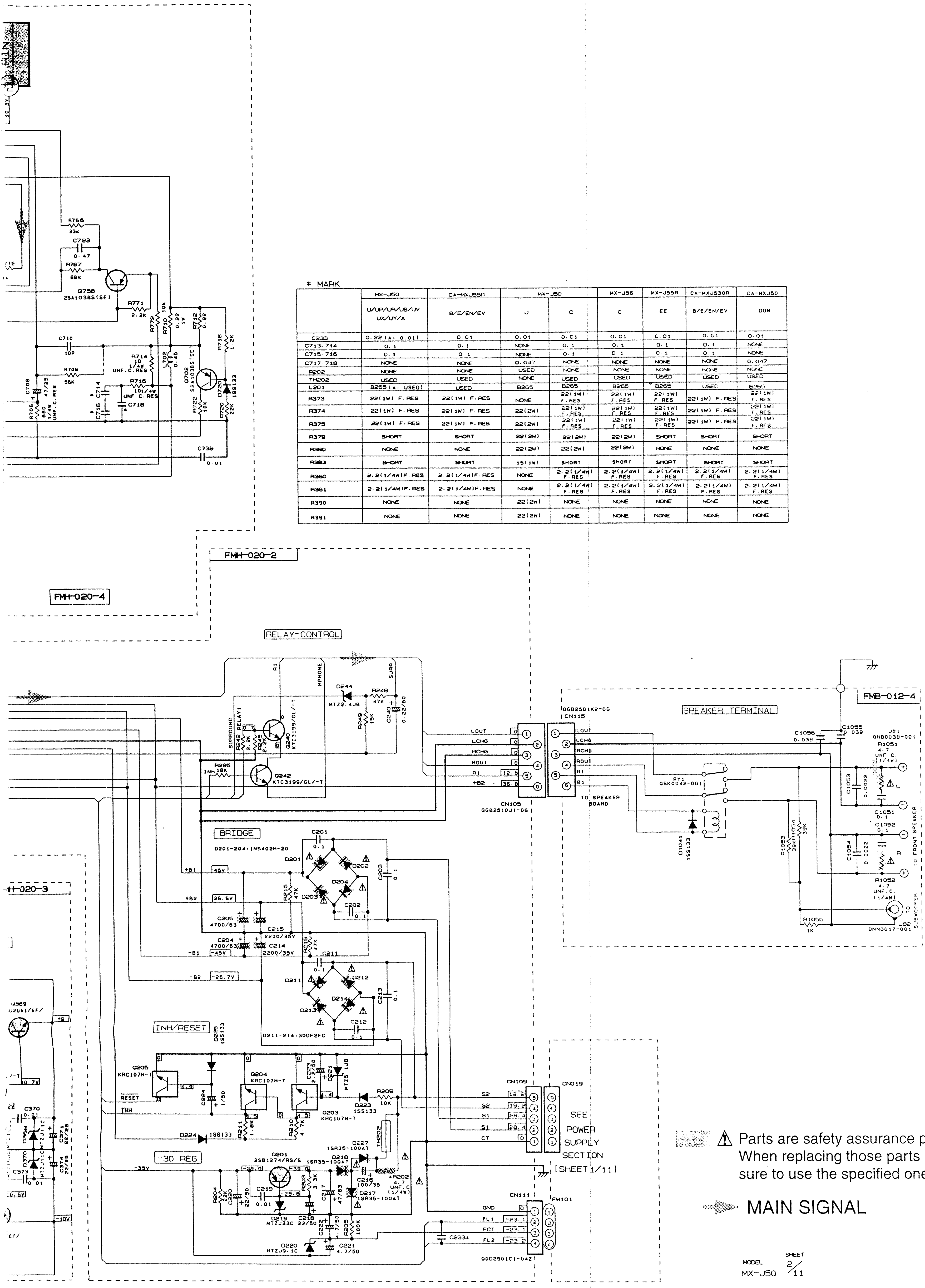
■Power Amplifier & Regulator Section


FRONT AMP
IC701
STK411-210E
+VH
GND
NC
-VL
+VL
-VH
CH1-V
CH2-V
LOUT
ROUT
LIN
NF1
RIN
TO MAIN BOARD
SMUTE
FRONTL
A.GND
FRONTR
FW703
H/P MUTE
PROTECTOR
CN915
HPL
HPR
A.GND
HPHONE
Q701
2SA1038S(SE)
Q726
2SC2389S(SE)
Q727
2SA1038S(SE)
Q728
KTC3199/GL/-T
Q733
Q734
Q735
Q736
2SC3576-JVC-T
Q737
KRA111M
Q758
2SA1038S(SE)
Q760
2SK301/PQ/-T
SURR
-B1
+B1
+B2
-B2
A.GND
+9V
PRT
LOUT
ROUT
HPHONE
SURR
QGD2501J1-11
CN113
FMH-020-4
CN103
QGD2501K2-11
TO CN416 OF FMC-017-2 MAIN BOARD
FL2
FL1
B.GND
M.GND
+8V
+5.6
D.GND
A.GND
-9V
+9V
QGD2501J1-10
L201
QQR0779-001Z
D245
1SS133
R394
10K
EP201
CN102
CN112
QGD2501K2-10
FMH-020-3
CN107
PRT
POUT
INH
RESET
RELAY1
SURROUND
QGD2501J1-07
+5.6V
Q360
2SD2061/EF/
Q361
KTC3199/GL/-T
Q362
KTC3199/GL/-T
D360
MTZ5.1JB
D361
MTZ11JC
D362
MTZ6.8JC
S2 REGULATOR
+9V
Q369
2SD2061/EF/
Q370
KTC3199/GL/-T
Q371
2SB1565/EF/
Q373
KRA104M
Q375
KRC104M
Q376
KRA104M-T
-9V
+8V
Q365
2SD2C61/EF/
Q366
2SD2061/EF/
Q367
KTA1267Y/YG/-T
Q368
KTC3199/GL/-T
D365
MTZJ9.1B
D366
MTZ11JC
6
5
4
3
2
1
A
B
C
D
E

Power Amplifier & Regulator Section


FRONT AMP
IC701
STK411-210E
+VH
GND
NC
+VL
+VL Comp
-VL Comp
-VL
-VH
-V
CH1-V
CH2-V
-VH
-VH
LOUT
POUT
-VH
+VH
LIN
-LIN
NF1
-RIN
RIN
TO MAIN BOARD
SMUTE
FRONTL
A.GND
FRONTR
FW703
D703
D704
D722
D721
D723
D724
R774
R702
100/1W
R701
100/1W
C711
C712
47/63V
R704
R703
C703
C704
470P
C705
C706
C721
C722
10/35V
R775
1K
R766
33K
C723
0.47
R767
68K
Q758
2SA1038S(SE)
R709
0.22
1W
R711
0.22
C709
10P
R707
56K
R713
L701
R715
C717
Q701
2SA1038S(SE)
R717
1.2K
D719
1SS133
C707
47/25
C708
47/25
R705
R706
R708
56K
C710
10P
C714
C716
H/P MUTE
PROTECTOR
Q737
KRA111M
Q736
2SC3576-JVC-T
R740
820 1/4W
UNF.C.RES
R736
4.7K
R734
4.7K
Q734
2SC3576-JVC-T
C726
10/25
R730
10K
Q726
2SC2389S(SE)
R727
100K
R725
82K
R728
10K
CN915
HPL
HPR
A.GND
HPHONE
R733
4.7K
Q733
2SC3576-JVC-T
Q727
2SA1038S(SE)
R729
100K
C729
47/16
Q728
KTC3199/GL/-T
D728
1SS133
R726
100K
R735
4.7K
Q735
2SC3576-JVC-T
R739
820
1/4W
UNF.C.RES
C780
0.082
R780
1M
R781
3.9K
Q760
2SK301/PQ/-T
SURR
R782
4.7K
-B1
+B1
+B2
-B2
A.GND
+9V
PAT
LOUT
ROUT
HPHONE
SURR
QGD2501J1-11
CN113
FMH-020-4
CN103
QGD2501K2-11
-23.4 FL2
-23.4 FL1
0 B.GND
0 M.GND
8.2V +8V
5.7V +5.6
0 D.GND
0 A.GND
-10V -9V
+9.7V +9V
TO CN416 OF FMC-017-2 MAIN BOARD
L201
QQR0779-001Z
D245
1SS133
QGD2501J1-10
R294
10K
M.GND
+8V
+B2
-B2
A.GND
-9V
+9V
D.GND
+5.6V
POUT
QGD2501J1-10
CN102
EP201
FL2
FL1
CN107
-29.1
5.1 PAT
5.0 POUT
4.6 INH
0 RESET
4.9 RELAY1
0 SURROUND
R290
R293
R291
R292
1K
QGD2501J1-07
CN112
QGD2501K2-10
FMH-020-3
+5.6V
Q360
2SD2061/EF/
R362
330
Q361
KTC3199/GL/-T
R363
330
R360
R361
R390
R391
R364
1.2K
R356
550
R365
560
R358
330
Q362
KTC3199/GL/-T
R367
1.2K
C362
C361
0.01
C360
22/25
D362
MTZ6.8JC
D360
MTZ5.1J8
D361
MTZ11JC
S2 REGULATOR
+9V
Q376
KRA104K-T
R379
R380
Q369
2SD2061/EF/
Q375
KRC104M
Q370
KTC3199/GL/-T
R381
2.7K
R382
5.6K
C369
22/25
D367
C370
0.01
C371
22/25
Q373
KRA104M
C372
22/25
D369
R385
5.6K
R384
2.7K
C373
0.01
C374
22/25
R389
10K
Q374
KRC104K-T
R383
Q371
2SB1565/EF/
-9V
+8V
Q365
2SD2061/EF/
Q366
2SD2061/EF/
R373
R374
R375
R371
4.7
R372
4.7
Q357
KTA1267Y/YG/-T
R376
220
C367
0.01
R377
680
C368
22/25
D366
MTZ11JC
D365
MTZ9.1B
C366
22/25
R378
1.8K
Q366
KTC3199/GL/-T
6
5
4
3
2
1
A
B
C
D
E

CA-MXJ55R/CA-MXJ530R


FMH-020-4
FMH-020-2
FMH-020-3
RELAY-CONTROL
BRIDGE
D201-204:1N5402H-20
D211-214:300F2FC
INH/RESET
-30 REG
SPEAKER TERMINAL
FMB-012-4
CN105
CN115
CN109
CN019
CN111
FW101
LOUT
LCHG
RCHG
ROUT
R1
+B2
+B1
-B1
-B2
45V
26.6V
-45V
-26.7V
RY1
QSK0042-001
D1041
1SS133
TO SPEAKER BOARD
TO FRONT SPEAKER
TO SUBWOOFER
J81
J82
C1055
C1056
R1051
R1052
R1053
R1054
R1055
Q240
KTC3199/GL/-T
Q242
KTC3199/GL/-T
Q758
2SA1038S(SE)
Q702
Q201
2SB1274/RS/S
Q203
KRC107M-T
Q204
KRC107M-T
Q205
KRC107M-T
C205
4700/63
C204
4700/63
C215
2200/35V
C214
2200/35V
RESET
INH
S2
S1
CT
GND
FL1
FCT
FL2
SEE POWER SUPPLY SECTION
[SHEET 1/11]
E
F
G
H
I

* MARK

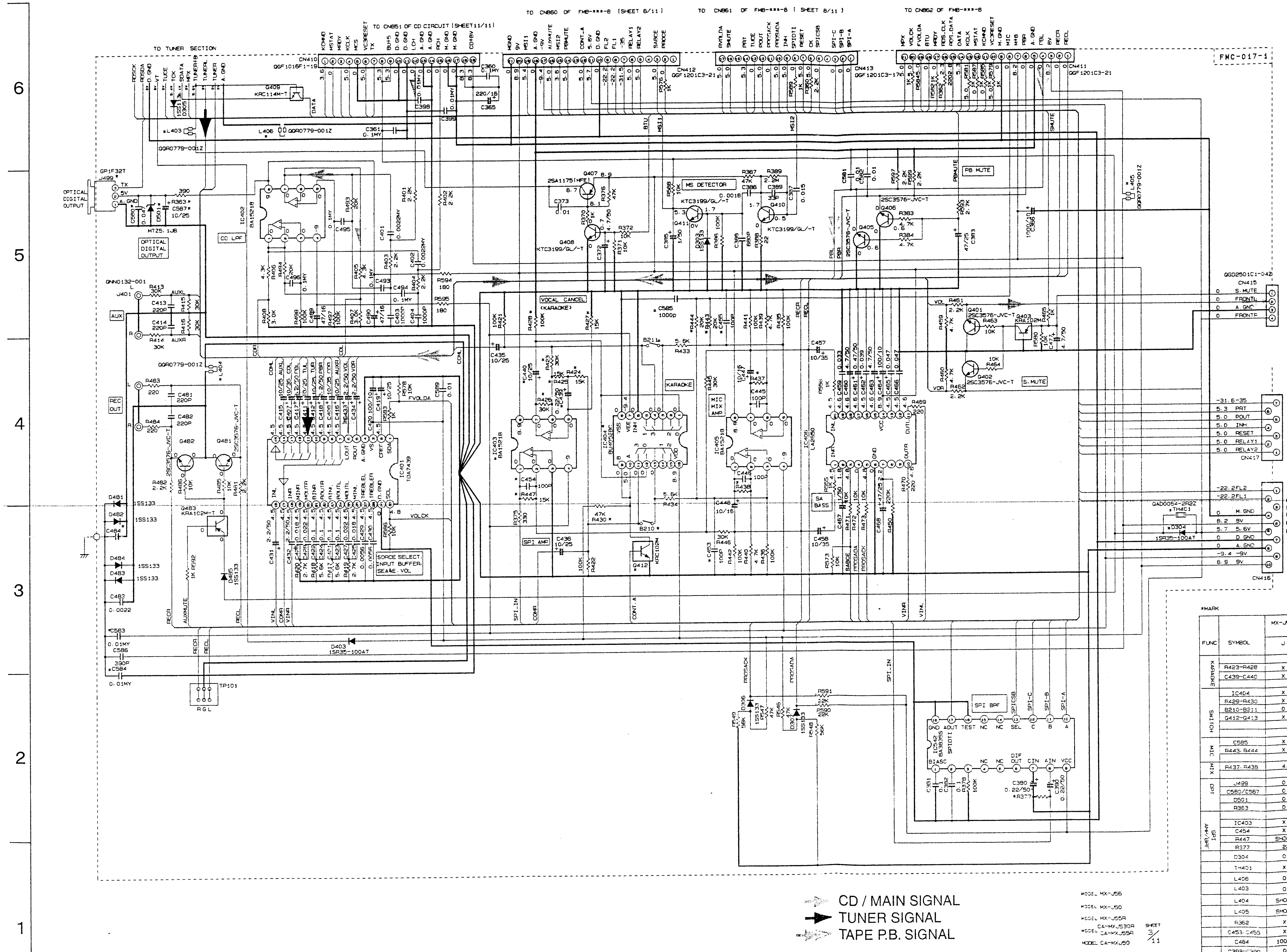
	MX-J50	CA-MXJ55R	MX-J50		MX-J56	MX-J55R	CA-MXJ530R	CA-MXJ50
	U/UP/UR/US/UV UX/UY/A	B/E/EN/EV	J	C	C	EE	B/E/EN/EV	DOM
C233	0.22 (A: 0.01)	0.01	0.01	0.01	0.01	0.01	0.01	0.01
C713, 714	0.1	0.1	NONE	0.1	0.1	0.1	0.1	NONE
C715, 716	0.1	0.1	NONE	0.1	0.1	0.1	0.1	NONE
C717, 718	NONE	NONE	0.047	NONE	NONE	NONE	NONE	0.047
R202	NONE	NONE	USED	NONE	NONE	NONE	NONE	NONE
TH202	USED	USED	NONE	USED	USED	USED	USED	USED
L201	B265 (A: USED)	USED	B265	B265	B265	B265	USED	B265
R373	22(1W) F.RES	22(1W) F.RES	NONE	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES
R374	22(1W) F.RES	22(1W) F.RES	22(2W)	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES
R375	22(1W) F.RES	22(1W) F.RES	22(2W)	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES	22(1W) F.RES
R379	SHORT	SHORT	22(2W)	22(2W)	22(2W)	SHORT	SHORT	SHORT
R380	NONE	NONE	22(2W)	22(2W)	22(2W)	NONE	NONE	NONE
R383	SHORT	SHORT	15(1W)	SHORT	SHORT	SHORT	SHORT	SHORT
R360	2.2(1/4W)F.RES	2.2(1/4W)F.RES	NONE	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES
R361	2.2(1/4W)F.RES	2.2(1/4W)F.RES	NONE	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES	2.2(1/4W) F.RES
R390	NONE	NONE	22(2W)	NONE	NONE	NONE	NONE	NONE
R391	NONE	NONE	22(2W)	NONE	NONE	NONE	NONE	NONE

▨ ⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

➡ MAIN SIGNAL

MODEL MX-J50
SHEET 2/11

■ Function & Main Amplifier Section


TO TUNER SECTION
TO CN651 OF CD CIRCUIT (SHEET11/11)
TO CN860 OF FMB-***-8 (SHEET 8/11)
TO CN861 OF FMB-***-8 (SHEET 8/11)
TO CN862 OF FMB-***-8
FMC-017-1
CN410
CN412
CN413
CN411
OPTICAL DIGITAL OUTPUT
CD LPF
MS DETECTOR
PB MUTE
VOCAL CANCEL (KARAOKE)
KARAOKE
MIC MIX AMP
SA BASS
SPI AMP
SPI BPF
SORCE SELECT. INPUT BUFFER. SEAME. VOL
AUX
REC OUT
S.MUTE
TO FMB-012-5 CONNECTOR BOARD
CN415
FROM CN107 OF FMH-013-2 POWER BOARD
CN417
FROM CN105 OF FMH-013-2 POWER AMP BOARD
CN416
TP101
R G L
IC401 TDA7439
IC402 BA15218
IC403 BA15218
IC404 BU4053BC
IC405 BA15218
IC406 LA2650
IC542 BA3835S
CD / MAIN SIGNAL
TUNER SIGNAL
TAPE P.B. SIGNAL

MODEL MX-J56
MODEL MX-J50
MODEL MX-J55R
MODEL CA-MXJ530R CA-MXJ55R
MODEL CA-MXJ50

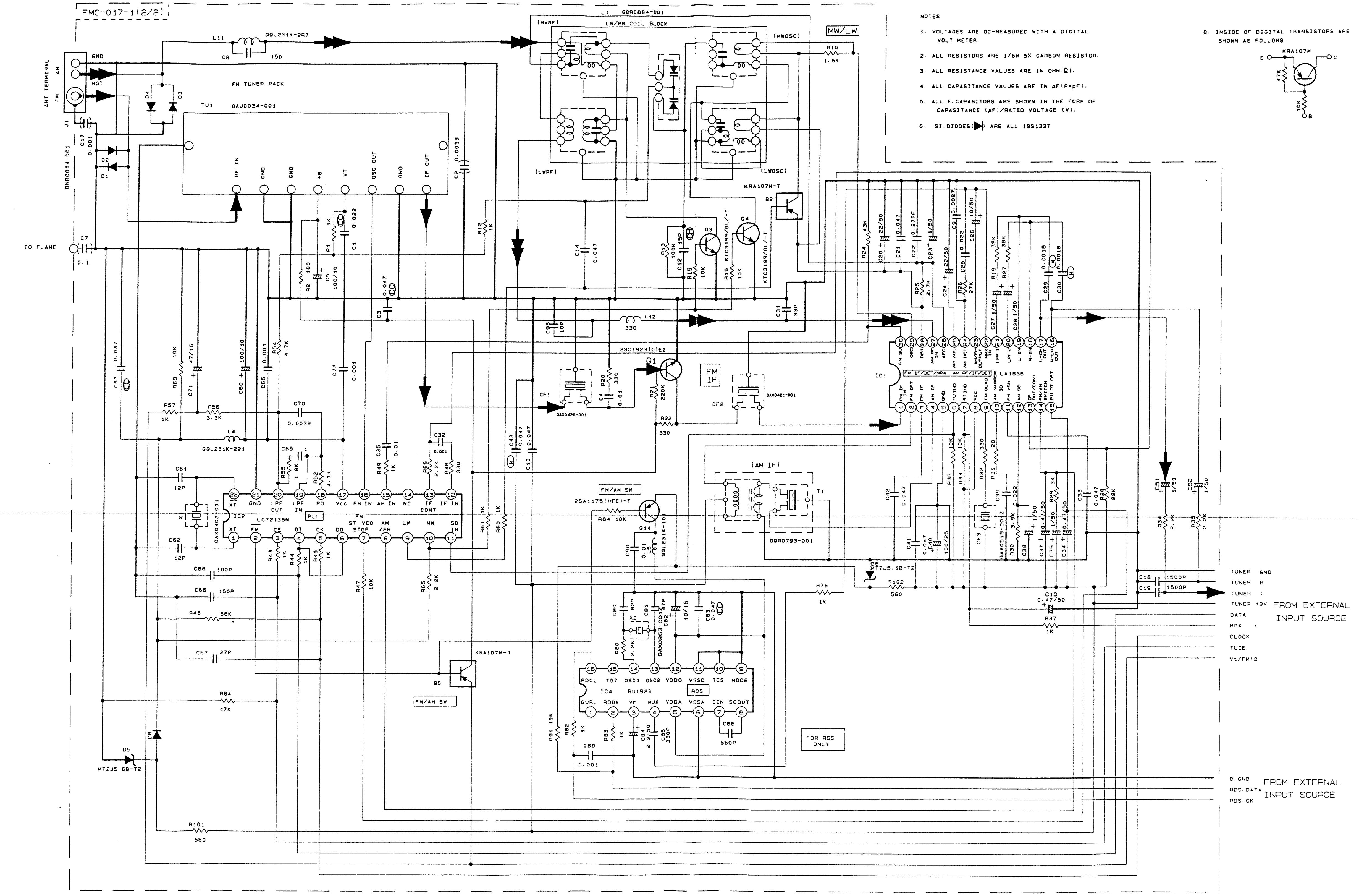
SHEET 3/11

*MARK

O: USED X: NONE

FUNC	SYMBOL	MX-J50	MX-J50 /MX-J56	MX-J50	MX-J50	CA-MXJ530R /CA-MXJ55R	MX-J55R	CA-MXJ50
		J	C	U. US. UP UT. UB	A	B. E. EN. EV	EE	DOM
KARAOKE	R423-R428	X	X	O	X	X	X	X
	C439-C440	X	X	O	X	X	X	X
SWITCH	IC404	X	X	O	X	X	X	X
	R429-R430	X	X	O	X	X	X	X
	B210-B211	O	O	X	O	O	O	O
	Q412-Q413	X	X	O	X	X	X	X
MIC	C585	X	X	O	X	X	X	X
	R443. R444	X	X	O	X	X	X	X
MIX	R437. R438	4.7K	4.7K	6.8K	4.7K	4.7K	4.7K	4.7K
OPT	J499	O	O / X	O	O	O	O	O
	C580/C567	O	O / X	O	O	O	O	O
	D501	O	O / X	O	O	O	O	O
	R363	O	O / X	O	O	O	O	O
SPI AMP/BPF	IC403	X	X	O	X	X	X	X
	C454	X	X	O	X	X	X	X
	R447	SHORT	SHORT	O	SHORT	SHORT	SHORT	SHORT
	R377	22K	22K	10K	22K	22K	22K	22K
	D304	O	X	X	X	X	X	X
	TH401	X	O	O	O	O	O	O
	L406	O	O	O	O	O	SHORT	O
	L403	O	O	O	O	O	SHORT	O
	L404	SHORT	SHORT	SHORT	O	O	SHORT	SHORT
	L405	SHORT	SHORT	SHORT	O	O	SHORT	SHORT
	R362	X	X	X	O	O	O	X
	C453. C455	X	X	X	O	O	X	X
	C484	100P	100P	1000P	0.0022	0.0022	100P	100P
	C398-C399	O	O	O	O	O	X	O
	C583	X	X	X	O	O	X	X
	C584	X	X	X	O	O	X	X

■TUNER Section (For Ver. B,E,EN,EV)


FMC-017-1(2/2)
L11 QQL231K-2R7
C8 15p
L1 QQR0884-001
LW/MW COIL BLOCK
(MWRF)
(MWOSC)
(LWRF)
(LWOSC)
MW/LW
R10 1.5K
ANT TERMINAL
AM
FM
GND
HOT
J1
QNB0014-001
FM TUNER PACK
TU1 QAU0034-001
RF IN
GND
GND
+B
VT
OSC OUT
GND
IF OUT
C2 0.0033
C17 0.001
D1
D2
D3
D4
TO FLAME
C7 0.1
R12 1K
R1 1K
C1 0.022
R2 180
C5 100/10
C3 0.047
C14 0.047
KRA107M-T
Q2
Q3
Q4
KTC3199(GL)-T
R13 100K
C12 15P
R15 10K
R16 10K
L12 330
C98 10P
C31 33P
2SC1923(O)E2
Q1
FM IF
R20 330
C4 0.01
R21 220K
R22 330
CF1 QAX0420-001
CF2 QAX0421-001
C63 0.047
R69 10K
C71 47/16
C60 100/10
C65 0.001
R54 4.7K
C72 0.001
R57 1K
R56 3.3K
C70 0.0039
L4 QQL231K-221
C69 1
R55 1.8K
R52 4.7K
R49 1K
C35 0.01
C32 0.001
R66 2.2K
R48 330
C43 0.047
C13 0.047
C61 12P
C62 12P
X1 QAX0402-001
IC2 LC72136N
XT GND LPF OUT LPF IN PD VCC FM IN AM IN NC IF CONT IF IN
XT FM CE DI CK DO FM ST VCO STOP AM /FM LW MW SD IN
PLL
R43 1K
R44 1K
R45 1K
R61 1K
R60 1K
R47 10K
R65 2.2K
C68 100P
C66 150P
R46 56K
C67 27P
R64 47K
KRA107M-T
Q6
FM/AM SW
FM/AM SW
2SA1175(HFE)-T
Q14
R84 10K
D5 MTZJ5.6B-T2
D6
R101 560
(AM IF)
T1
QQR0793-001
C90 0.01
L5 QQL231K-101
C80 82P
X2
C81 47P
C82 10/16
C83 0.047
R80 2.2K
QAX0263-001
IC4 BU1923
RDS
16 RDCL 15 T57 14 OSC1 13 OSC2 12 VDDD 11 VSSD 10 TES 9 MODE
QUAL RDDA Vr MUX VDDA VSSA CIN SCOUT
C86 560P
R91 10K
R82 1K
R83 1K
C84 2.2/50
C85 330P
C89 0.001
FOR RDS ONLY
IC1 LA1838
FM IF/DET/MPX AM RF/IF/DET
R24 43K
C20 22/50
C21 0.047
C22 0.27MF
C23 1/50
C9 0.0027
C26 10/50
R25 2.7K
C24 22/50
C25 0.022
R26 27K
R19 39K
R27 39K
C27 1/50
C28 1/50
C29 0.0018
C30 0.0018
C42 0.047
C41 0.047
C40 100/25
R36 13K
R33 13K
R32 330
R31 20
CF3 QAX0519-001Z
C39 0.022
R30 3.9K
C38 1/50
C37 0.47/50
C36 1/50
C34 0.47/50
R28 3.3K
C33 0.047
R29 22K
C51 1/50
C52 1/50
R34 2.2K
R35 2.2K
D8 MTZJ5.1B-T2
R102 560
R76 1K
C18 1500P
C19 1500P
C10 0.47/50
R37 1K
TUNER GND
TUNER R
TUNER L
TUNER +9V
DATA
MPX
CLOCK
TUCE
Vt/FM+B
FROM EXTERNAL INPUT SOURCE
D.GND
RDS.DATA
RDS.CK
FROM EXTERNAL INPUT SOURCE
KRA107M
E
C
B
47K
10K
1
2
3
4
5
6
A
B
C
D
E
F
G
H
I

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI.DIODES(▶|) ARE ALL 1SS133T

8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.

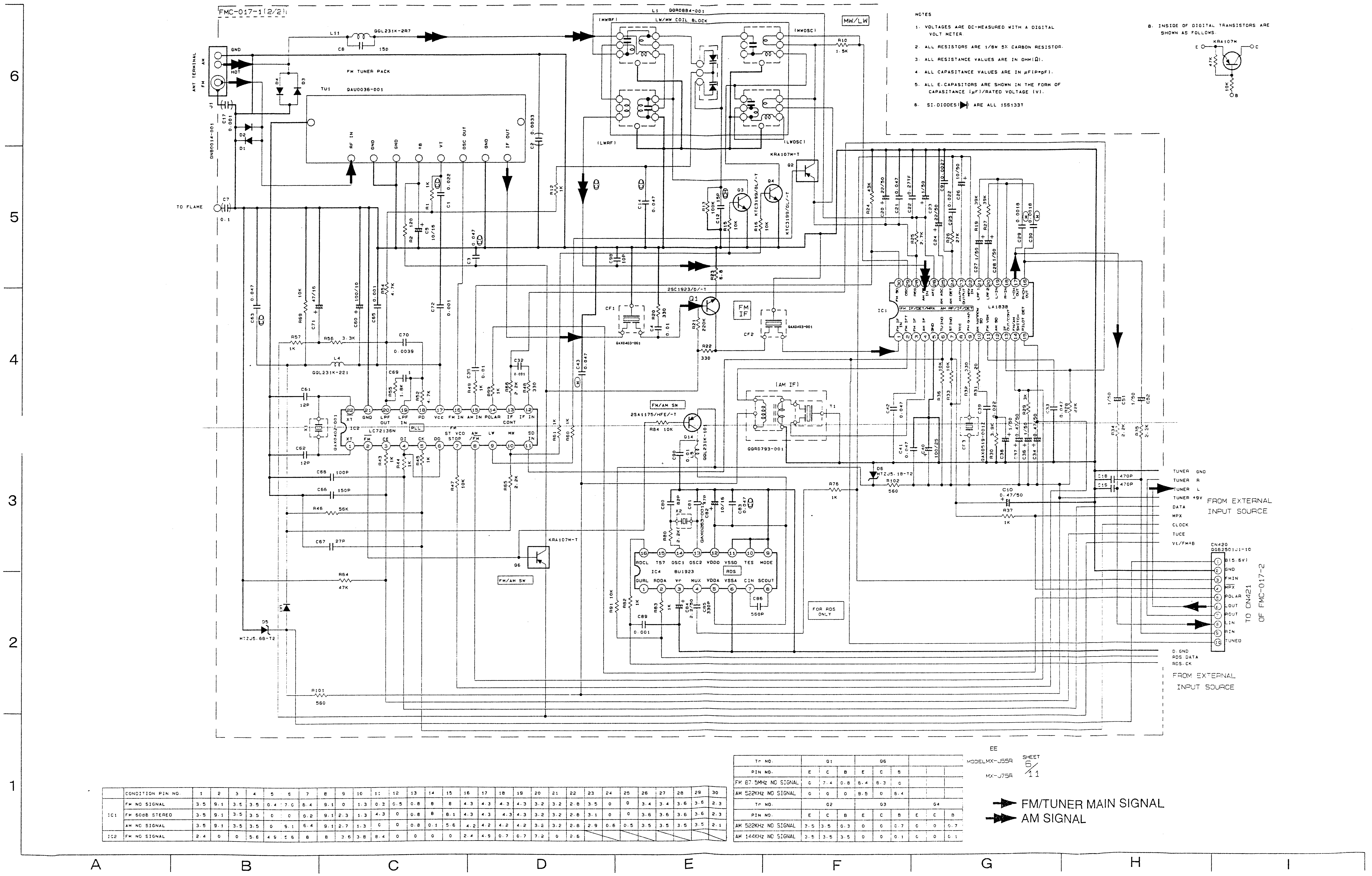
	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.5	9.1	3.5	3.5	0.4	7.0	6.4	9.1	0	1.3	0.3	0.5	0.6	8	8	4.3	4.3	4.3	4.3	3.2	3.2	2.8	3.5	0	0	3.4	3.4	3.6	3.6	2.3
	FM 60dB STEREO	3.5	9.1	3.5	3.5	0	0	0.2	9.1	2.3	1.3	4.3	0	0.8	8	8.1	4.3	4.3	4.3	4.3	3.2	3.2	2.8	3.1	0	0	3.6	3.6	3.6	3.6	2.3
	AM NO SIGNAL	3.5	9.1	3.5	3.5	0	9.1	6.4	9.1	2.7	1.3	0	0	0.8	0.1	5.6	4.2	4.2	4.2	4.2	3.2	3.2	2.8	2.9	0.6	0.5	3.5	3.5	3.5	3.5	2.1
IC2	FM NO SIGNAL	2.4	0	0	5.6	4.9	5.6	8	8	3.6	3.8	8.4	0	0	0	0	2.4	4.9	0.7	0.7	7.2	0	2.6								

Tr NO.	Q1			Q6					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.4	0.8	8.4	8.3	0			
AM 522KHz NO SIGNAL	0	0	0	8.5	0	8.4			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	3.5	3.5	0.3	0	0	0.7	0	0	0.7
AM 144KHz NO SIGNAL	3.5	3.5	3.5	0	0	0.1	0	0	0.1

B/E/EN/EV
MODEL CA-MXJ530R
CA-MXJ55R
SHEET 5/11

→ FM/TUNER MAIN SIGNAL
↠ AM SIGNAL

■TUNER Section (For Ver. EE)


FMC-017-1(2/2)
ANT TERMINAL
AM
FM
GND
HOT
J1
QNB0014-001
TO FLAME
L11 QQL231K-2R7
FM TUNER PACK
TU1 QAU0036-001
RF IN
GND
VT
OSC OUT
IF OUT
L1 QQR0884-001
LW/MW COIL BLOCK
(MWRF)
(MWOSC)
(LWRF)
(LWOSC)
MW/LW
KRA107M-T
KTC3199/GL/-T
2SC1923/O/-T
FM IF
CF1
CF2
QAX0403-001
IC1 LA1838
FM IF/DET/MPX AM RF/IF/DET
IC2 LC72136N
PLL
XT
LPF OUT
LPF IN
PD
Vcc
FM IN
AM IN
POLAR
IF CONT
IF IN
CE
DI
CK
DO
ST VCO STOP
AM/FM
LW
MW
SD
X1 QAX0402-001
L4 QQL231K-221
FM/AM SW
2SA1175/HFE/-T
[AM IF]
QQR0793-001
T1
IC4 BU1923
RDS
RDCL
T57
OSC1
OSC2
VDDD
VSSD
TES
MODE
QUAL
RDDA
Vr
MUX
VDDA
VSSA
CIN
SCOUT
X2 QAX0263-001
FOR RDS ONLY
Q6 KRA107M-T
D5 MTZJ5.6B-T2
D6 MTZJ5.1B-T2
TUNER GND
TUNER R
TUNER L
TUNER +9V
DATA
MPX
CLOCK
TUCE
Vt/FM+B
FROM EXTERNAL INPUT SOURCE
CN420 QGB2501J1-10
B(5.6V)
GND
TMIN
MPX
POLAR
LOUT
ROUT
LIN
RIN
TUNED
TO CN421 OF FMC-017-2
D.GND
RDS DATA
RDS CK
FROM EXTERNAL INPUT SOURCE
KRA107M
E
C
B
47K
10K
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI.DIODES(▶|) ARE ALL 1SS133T
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.

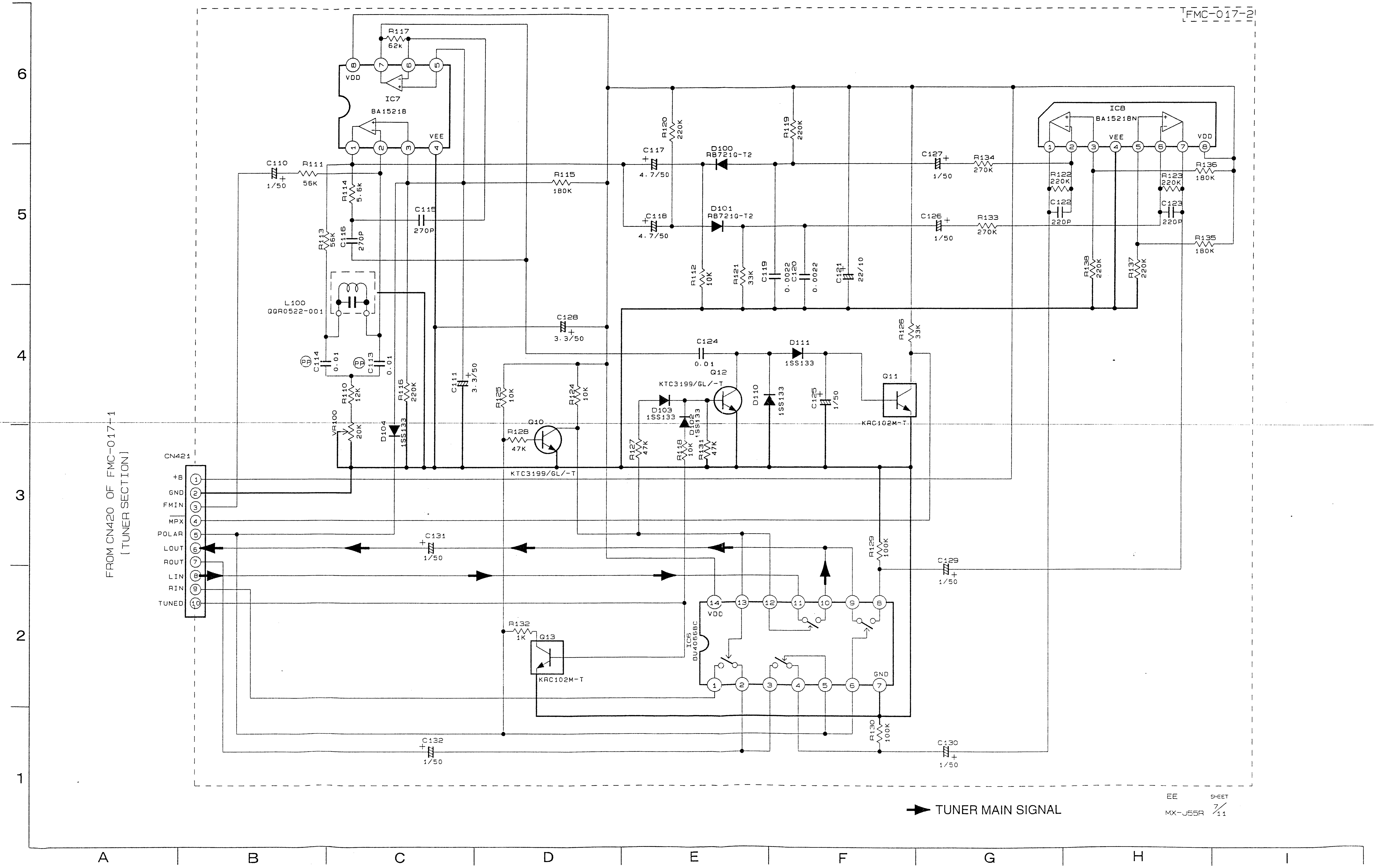
	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.5	9.1	3.5	3.5	0.4	7.0	6.4	9.1	0	1.3	0.3	0.5	0.8	8	8	4.3	4.3	4.3	4.3	3.2	3.2	2.8	3.5	0	0	3.4	3.4	3.6	3.6	2.3
	FM 60dB STEREO	3.5	9.1	3.5	3.5	0	0	0.2	9.1	2.3	1.3	4.3	0	0.8	8	8.1	4.3	4.3	4.3	4.3	3.2	3.2	2.8	3.1	0	0	3.6	3.6	3.6	3.6	2.3
	AM NO SIGNAL	3.5	9.1	3.5	3.5	0	9.1	6.4	9.1	2.7	1.3	0	0	0.8	0.1	5.6	4.2	4.2	4.2	4.2	3.2	3.2	2.8	2.9	0.6	0.5	3.5	3.5	3.5	3.5	2.1
IC2	FM NO SIGNAL	2.4	0	0	5.6	4.9	5.5	8	8	3.6	3.8	8.4	0	0	0	0	2.4	4.9	0.7	0.7	7.2	0	2.6								

Tr NO.	Q1			Q6					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.4	0.8	6.4	6.3	0			
AM 522KHz NO SIGNAL	0	0	0	8.5	0	6.4			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	3.5	3.5	0.3	0	0	0.7	0	0	0.7
AM 144KHz NO SIGNAL	3.5	3.5	3.5	0	0	0.1	0	0	0.1

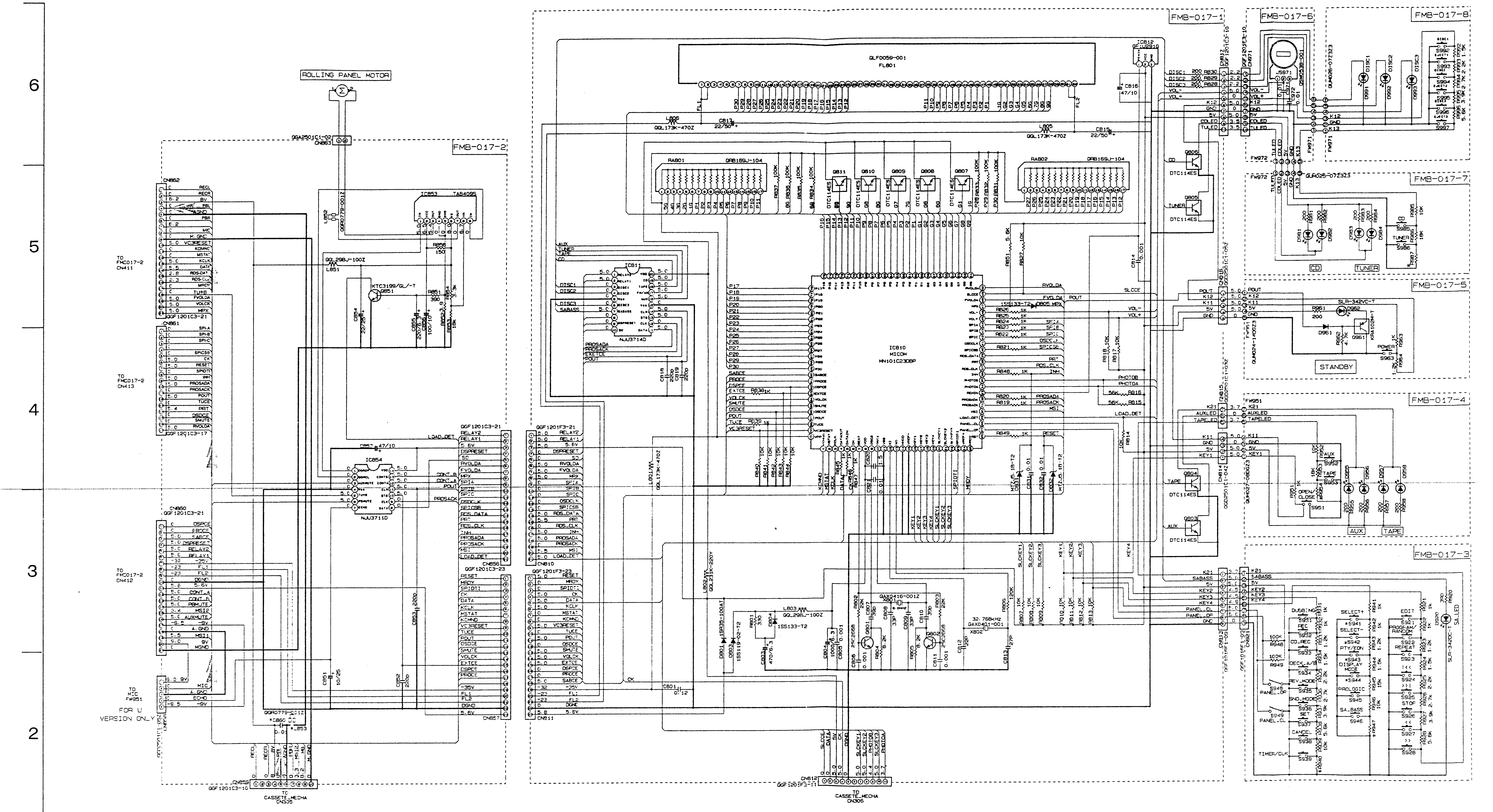
EE
MODEL MX-J55R
MX-J75R
SHEET 6/11

➡ FM/TUNER MAIN SIGNAL
➡ AM SIGNAL

■POLAR Section (For Ver. EE)


FMC-017-2
IC7
BA15218
VDD
VEE
R117 62K
C110 1/50
R111 56K
R114 5.6K
R113 56K
C116 270P
C115 270P
R115 180K
L100 QQR0522-001
C114 0.01
C113 0.01
R110 12K
VR100 20K
D104 1SS133
R116 220K
C111 3.3/50
C128 3.3/50
R125 10K
R124 10K
R128 47K
Q10
KTC3199/GL/-T
C117 4.7/50
C118 4.7/50
R120 220K
D100 RB721Q-T2
D101 RB721Q-T2
R119 220K
R112 10K
R121 33K
C119 0.0022
C120 0.0022
C121 22/10
C124 0.01
D111 1SS133
Q12 KTC3199/GL/-T
D103 1SS133
D102 1SS133
D110 1SS133
C125 1/50
R127 47K
R118 10K
R131 47K
R126 33K
Q11 KRC102M-T
C127 1/50
R134 270K
C126 1/50
R133 270K
IC8 BA15218N
R122 220K
C122 220P
R123 220K
C123 220P
R136 180K
R135 180K
R138 220K
R137 220K
CN421
+B
GND
FMIN
MPX
POLAR
LOUT
ROUT
LIN
RIN
TUNED
FROM CN420 OF FMC-017-1 [TUNER SECTION]
C131 1/50
C132 1/50
R132 1K
Q13 KRC102M-T
IC6 BU4066BC
VDD
GND
R129 100K
C129 1/50
R130 100K
C130 1/50
TUNER MAIN SIGNAL
EE
SHEET
MX-J55R 7/11
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I

■ FL Display & System Controller Section


ROLLING PANEL MOTOR
FMB-017-1
FMB-017-2
FMB-017-3
FMB-017-4
FMB-017-5
FMB-017-6
FMB-017-7
FMB-017-8
QLF0059-001
FL801
IC810
MICOM
MN101C230BP
IC811
NJU3714D
IC853
TA8409S
IC854
NJU3711D
IC812
GP1U281Q
RA801
RA802
DRB169J-104
TO FMC017-2 CN411
TO FMC017-2 CN413
TO FMC017-2 CN412
TO MIC FW951
FOR U VERSION ONLY
TO CASSETE_MECHA CN305
TO CASSETE_MECHA CN306
CD
TUNER
AUX
TAPE
STANDBY
POWER
DTC114ES
KTC3199(GL)-T
32.768KHz
DUBBING
CD_REC
DECK_A/B
REV_MODE
SND_MODE
SET
CANCEL
TIMER/CLK
SELECT+
SELECT-
PTY/EON
DISPLAY MODE
PROLOGIC
SA.BASS
EDIT
PROGRAM/RANDOM
REPEAT
STOP
SA_LED
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I

* MARK	J50-SERIES								J70-SERIES						
MODEL	MX-J50 MX-J56	MX-J50				CA-MXJ50	CA-MXJ55R CA-MXJ530R	MX-J55R	MX-J70 MX-J76	CA-MCJ70				CA-MXJ75R	MX-J75R
ITEM / VERSION	J/C	U/UP/US/UT/UV	UR/UY	UX	A	DOM	E/E/EN/EV	EE	J/C	U/UP/US/UT/UV	UR/UY	UX	A	B/E/EN/EV	EE
S941	x	x	x	x	x	x	0	0	x	x	x	x	x	0	0
S942	x	x	x	x	x	x	0	0	x	x	x	x	x	0	0
S943	x	x	x	x	x	x	0	0	x	x	x	x	x	0	0
S944	x	x	x	x	x	x	0	0	x	x	x	x	x	0	0
R940	56K	56K	x	18K	x	x	56K	x	56K	56K	x	18K	x	56K	x
R947	56K	x	18K	x	x	x	x	56K	56K	x	18K	x	x	x	56K
R954	56K	56K	x	x	56K	x	x	x	56K	56K	x	x	56K	x	x
R987	x	x	x	x	x	x	x	x	56K	56K	56K	56K	56K	56K	56K
L853	x	x	x	x	0	x	0	x	x	x	x	x	0	0	x
C850	x	x	x	x	0	x	0	x	x	x	x	x	0	0	x

NOTES

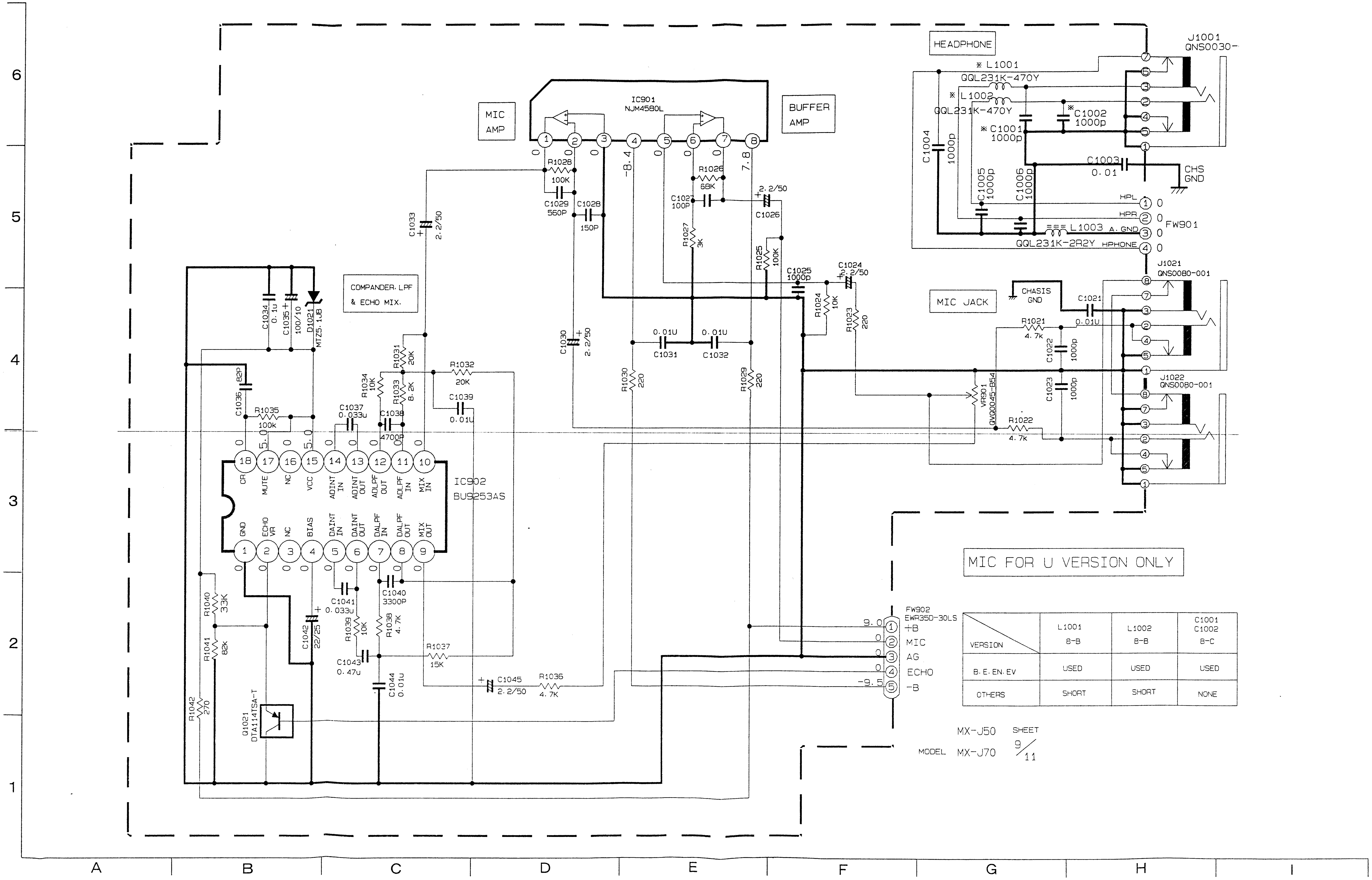
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION — TAPE PB MODE
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133
3. ALL TACT SWICTHES ARE QSW0674-001Z UNLESS OTHERWISE SPECIFIED
4. ALL LEDs ARE SLR-342VC-T UNLESS OTHERWISE SPECIFIED

⇨ TAPE P.B. SIGNAL

MX-J70
MODEL MX-J50

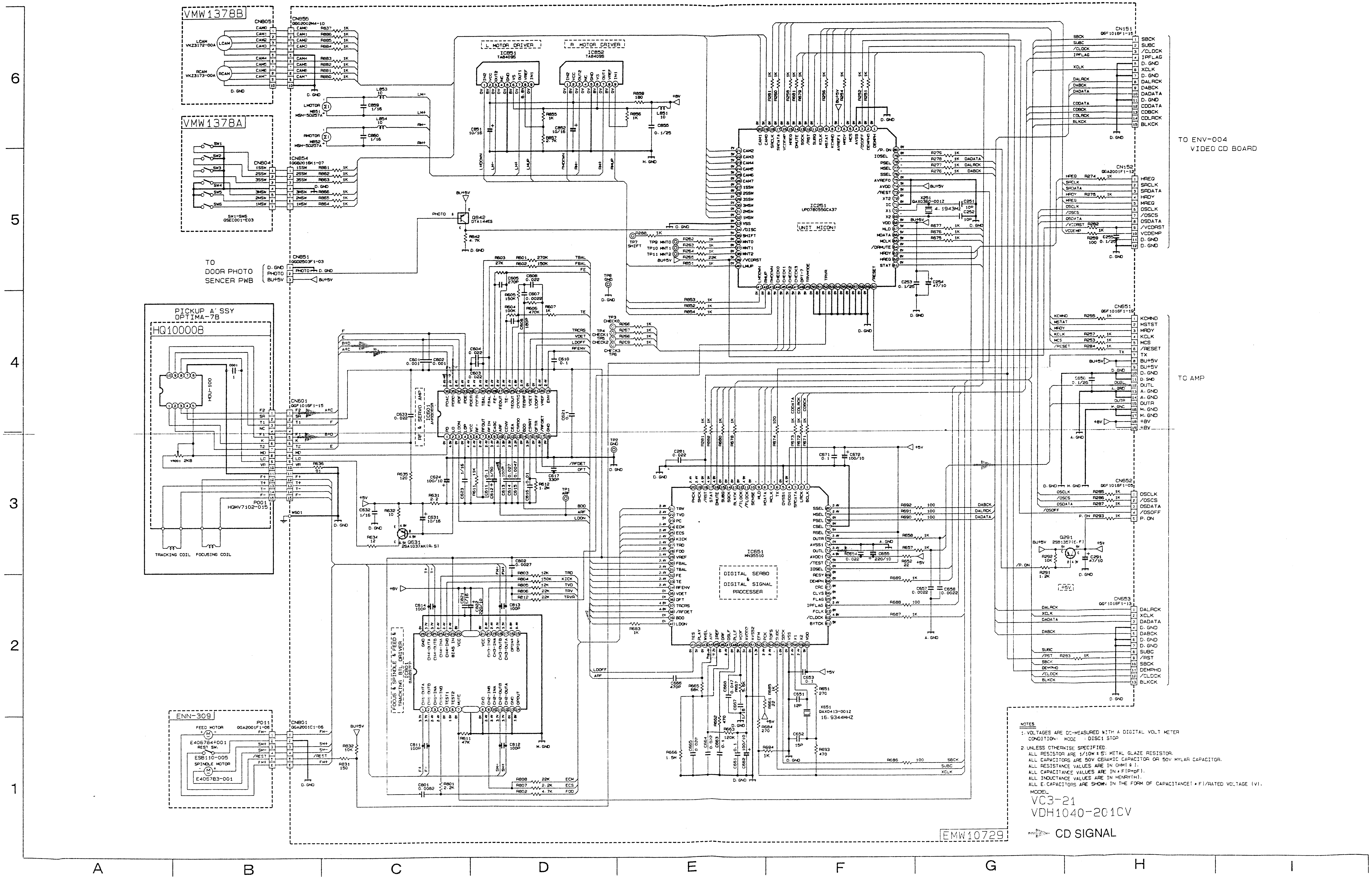
SHEET 8/11

■ MIC & Headphone Section


IC901
NJM4580L
MIC AMP
BUFFER AMP
R1028 100K
C1029 560P
C1028 150P
C1033 2.2/50
R1026 68K
C1027 100P
R1027 3K
C1026 2.2/50
R1025 100K
C1025 1000p
C1024 2.2/50
R1024 10K
R1023 220
C1030 2.2/50
C1031 0.01U
C1032 0.01U
R1030 220
R1029 220
-8.4
7.8
COMPANDER, LPF & ECHO MIX.
C1034 0.1u
C1035 100/10
D1021 MTZ5.1JB
C1036 82P
R1035 100k
R1031 20K
R1034 10K
R1033 8.2K
R1032 20K
C1037 0.033u
C1038 4700P
C1039 0.01U
IC902
BU9253AS
CR
MUTE
NC
VCC
ADINT IN
ADINT OUT
ADLPF OUT
ADLPF IN
MIX IN
GND
ECHO VR
BIAS
DAINT IN
DAINT OUT
DALPF IN
DALPF OUT
MIX OUT
5.0
C1041 0.033u
C1040 3300P
R1039 10K
R1038 4.7K
C1043 0.47u
C1044 0.01U
R1037 15K
C1045 2.2/50
R1036 4.7K
R1040 33K
R1041 82k
R1042 270
C1042 22/25
Q1021 DTA114TSA-T
HEADPHONE
J1001
QNS0030-
※ L1001
QQL231K-470Y
※ L1002
QQL231K-470Y
※C1002 1000p
※ C1001 1000p
C1004 1000p
C1005 1000p
C1006 1000p
C1003 0.01
CHS GND
HPL
HPR
A. GND
HPHONE
L1003
QQL231K-2R2Y
FW901
J1021
QNS0080-001
MIC JACK
CHASIS GND
C1021 0.01U
R1021 4.7K
C1022 1000p
C1023 1000p
VR901
QVQ0045-B54
R1022 4.7K
J1022
QNS0080-001
MIC FOR U VERSION ONLY
FW902
EWR35D-30LS
9.0
-9.5
+B
MIC
AG
ECHO
-B
MODEL
MX-J50
MX-J70
SHEET
9/11
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6

VERSION	L1001 8-B	L1002 8-B	C1001 C1002 8-C
B. E. EN. EV	USED	USED	USED
OTHERS	SHORT	SHORT	NONE

■ CD Servo & CD Mechanism Control Section


VMW1378B
VMW1378A
CN805
CN855
LCAM VKZ3172-00A
RCAM VKZ3173-00A
CN804
CN854
SW1–SW6 QSEC001-E03
L MOTOR DRIVER
IC851 TA8409S
R MOTOR DRIVER
IC852 TA8409S
LMOTOR M851 MSN-50257A
RMOTOR M852 MSN-50257A
Q842 DTA144ES
PHOTO
TO DOOR PHOTO SENCER PWB
CN851
PICKUP A'SSY OPTIMA-7B
HQ100008
HOU-100
CN501
P001 HQMV7102-015
TRACKING COIL
FOCUSING COIL
IC601 RF & SERVO AMP
Q631 2SA1037AK(R.S)
IC251 UPD78055GCA37
UNIT MICON
X251 QAX0360-001Z 4.1943MHz
IC651 MN35510
DIGITAL SERBO & DIGITAL SIGNAL PROCESSER
X651 QAX0413-001Z 16.9344MHZ
FOCUS & SPINDLE & FEED & TRACKING BTL DRIVER
ENN-309
FEED MOTOR E406784-001
REST SW. ESB110-005
SPINDLE MOTOR E406783-001
P011
CN801
CN151
TO ENV-004 VIDEO CD BOARD
CN152
CN651
TO AMP
Q291 2SB1357(E.F)
CN652
CN653
EMW10729
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6

NOTES

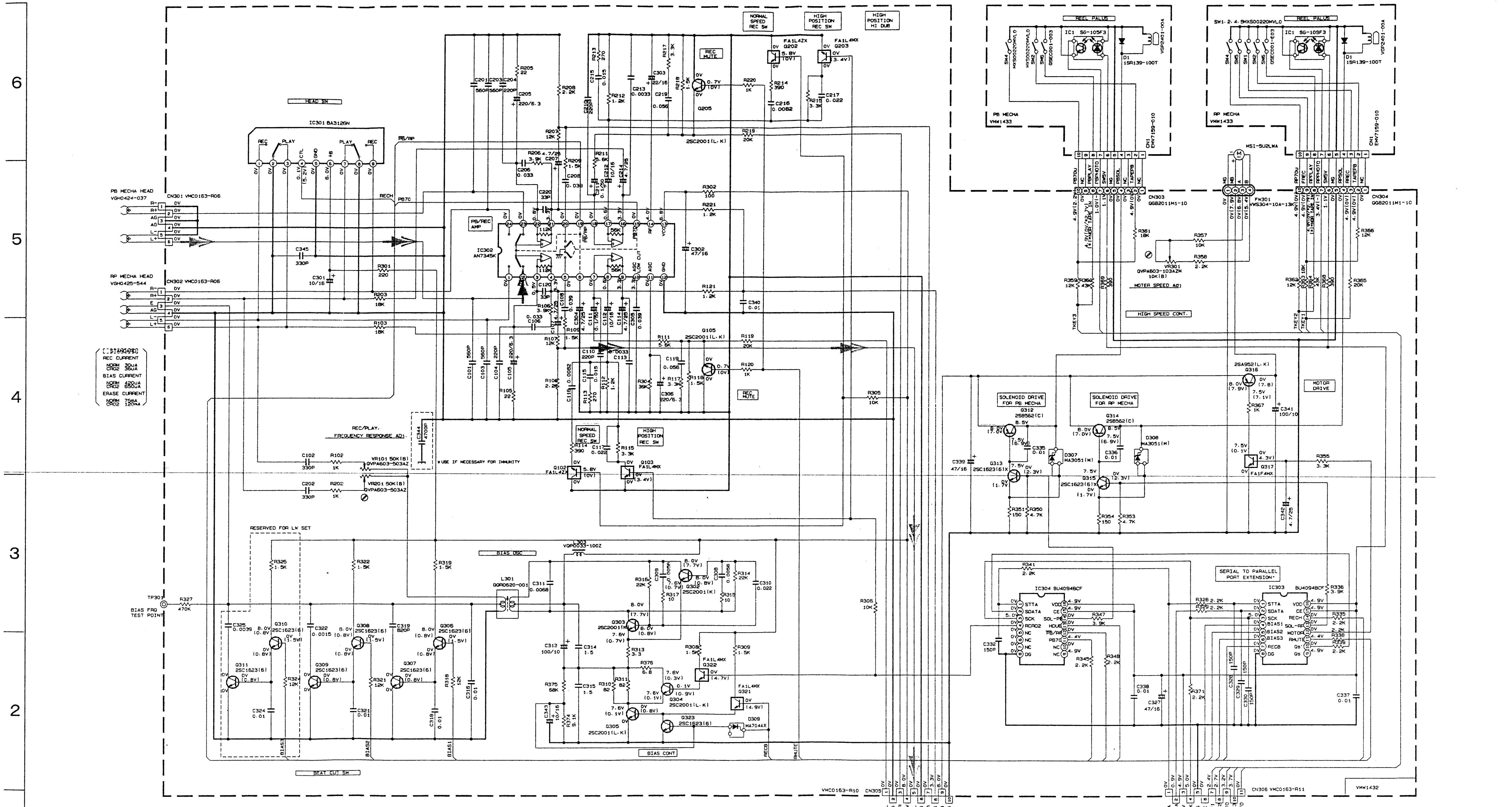
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
CONDITION: MODE : DISC1 STOP

2. UNLESS OTHERWISE SPECIFIED.
ALL RESISTOR ARE 1/10W ± 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM(Ω).
ALL CAPACITANCE VALUES ARE IN μF(P=pF).
ALL INDUCTANCE VALUES ARE IN HENRY(H).
ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).

MODEL
VC3-21
VDH1040-201CV

⇢ CD SIGNAL

■Head Amplifier & Mechanism Control Section


HEAD SW
IC301 BA3126N
REC PLAY PLAY REC
PB MECHA HEAD VGH0424-037
CN301 VMC0163-R06
RP MECHA HEAD VGH0425-544
CN302 VMC0163-R06
PB/REC AMP
IC302 AN7345K
NORMAL SPEED REC SW
HIGH POSITION REC SW
HIGH POSITION HI DUB
REC MUTE
REC/PLAY FREQUENCY RESPONSE ADJ.
VR101 50K(B) QVPA603-503AZ
VR201 50K(B) QVPA603-503AZ
*USE IF NECESSARY FOR IMMUNITY
RESERVED FOR LW SET
BIAS OSC
L301 QQR0620-001
VQP0035-100Z
BIAS CONT
BEAT CUT SW
TP301 BIAS FRQ TEST POINT
REEL PALUS
IC1 SG-105F3
D1 1SR139-100T
PB MECHA VMW1433
RP MECHA VMW1433
CN1 EM7159-010
CN303 QGB2011M1-10
CN304 QGB2011M1-10
M51-5U2LWA
FW301 VWS304-10A-13K
VR301 10K(B) QVPA603-103AZH
MOTER SPEED ADJ
HIGH SPEED CONT.
SOLENOID DRIVE FOR PB MECHA
SOLENOID DRIVE FOR RP MECHA
MOTOR DRIVE
SERIAL TO PARALLEL PORT EXTENSION
IC304 BU4094BCF
IC303 BU4094BCF
CN305 VMC0163-R10
CN306 VMC0163-R11
VMW1432
RECL AG RECR SWBV PBL AG PBR MS MB MG
GARD GND
NOT CONNECT TO SET
FROM CN803 OF FMB-021-1 (SHEET /11)
STTA SDATA SW5V SCK DG NC TKEY1 TKEY2 PBPHOTO TKEY3 RPPHOTO
FROM CN412 OF FMC-012-1 (SHEET /11)
DEFFERENT TO SINGL MECHA
6
5
4
3
2

1

A B C D E F G H I

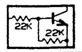
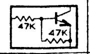
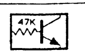
SLC-W5
VDH1033-003PV

TAPE P.B. SIGNAL

NOTES

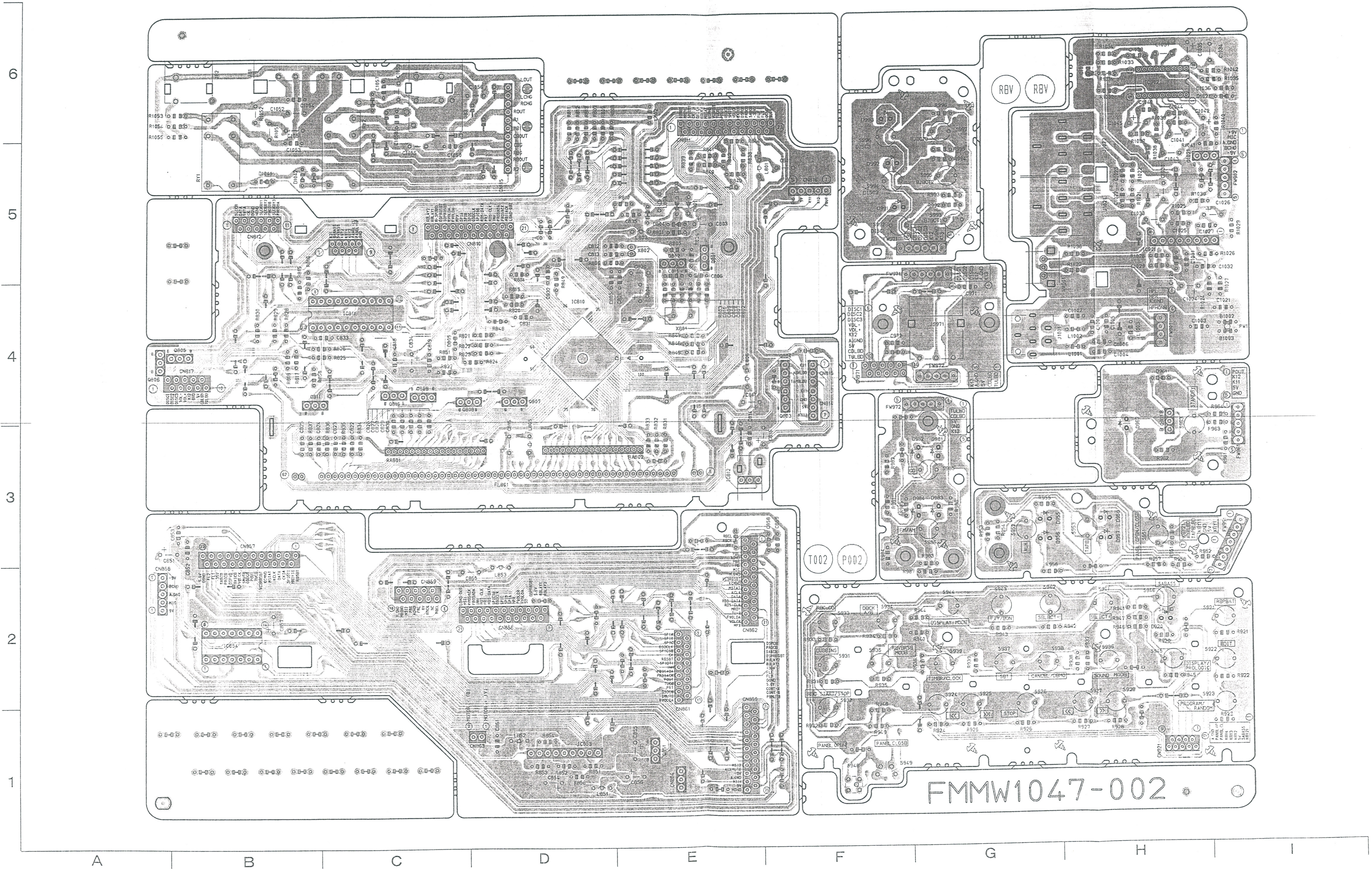
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. ( ) IS INVERT MODE
2. UNLESS OTHERWISE SPECIFIED
   - ALL RESISTANCE VALUES ARE IN OHM( )Ω
   - ALL CAPACITORS ARE CERAMIC CAPACITOR
   - ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   - ALL INDUCTANCE VALUES ARE IN H(m=mH).
   - ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - ⊥ PLYPROPYLENE CAPACITOR

TABLE 1. DIGITAL TR LIST

PART. NO	CONSTRVCTION	REF. NO
FA1F4M		Q317
FA1L4M		Q103/Q203 Q321/Q322
FA1L4Z		Q102/Q202

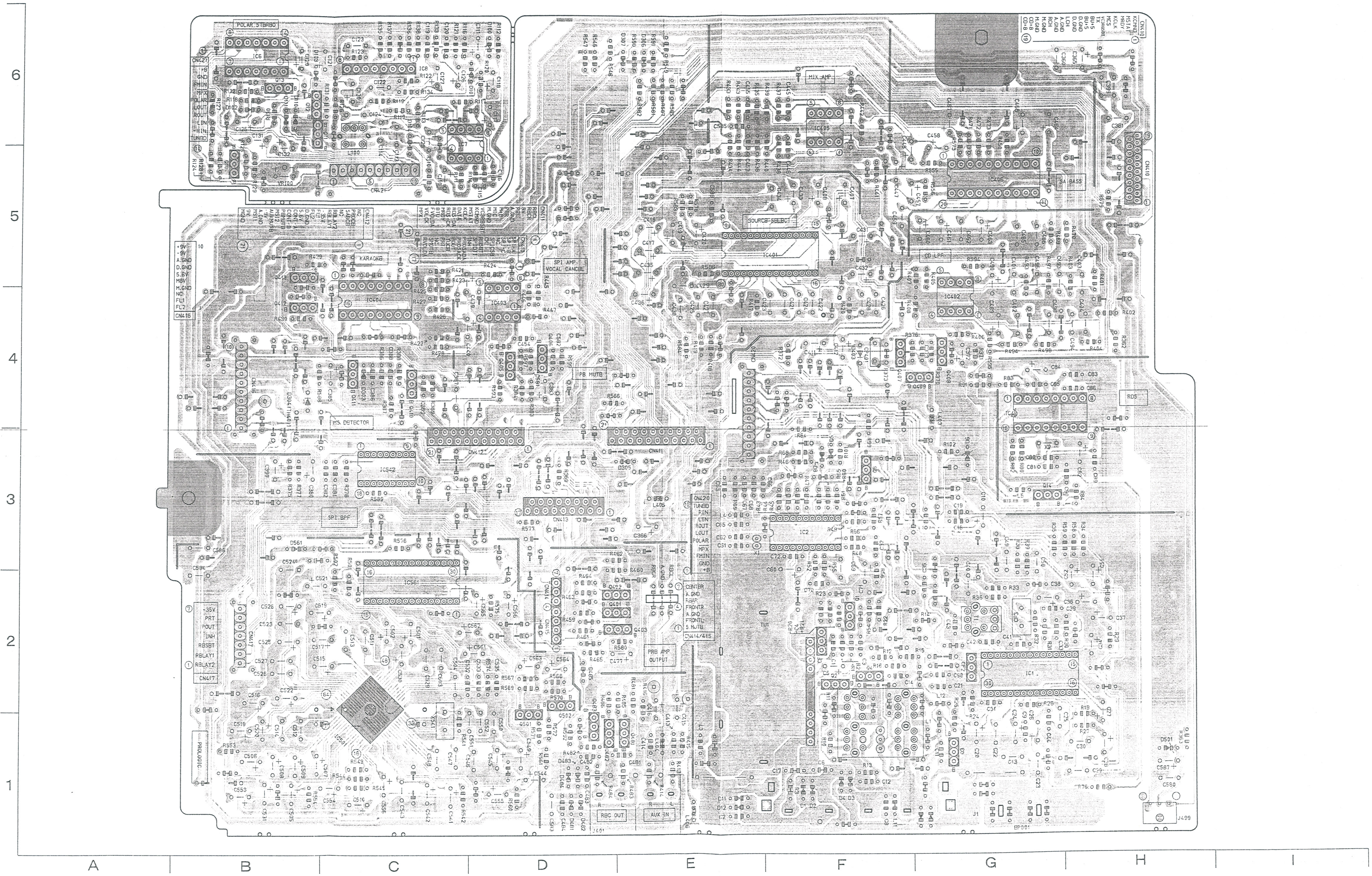
Printed Circuit Boards

■ System Control & Operation Switch Board

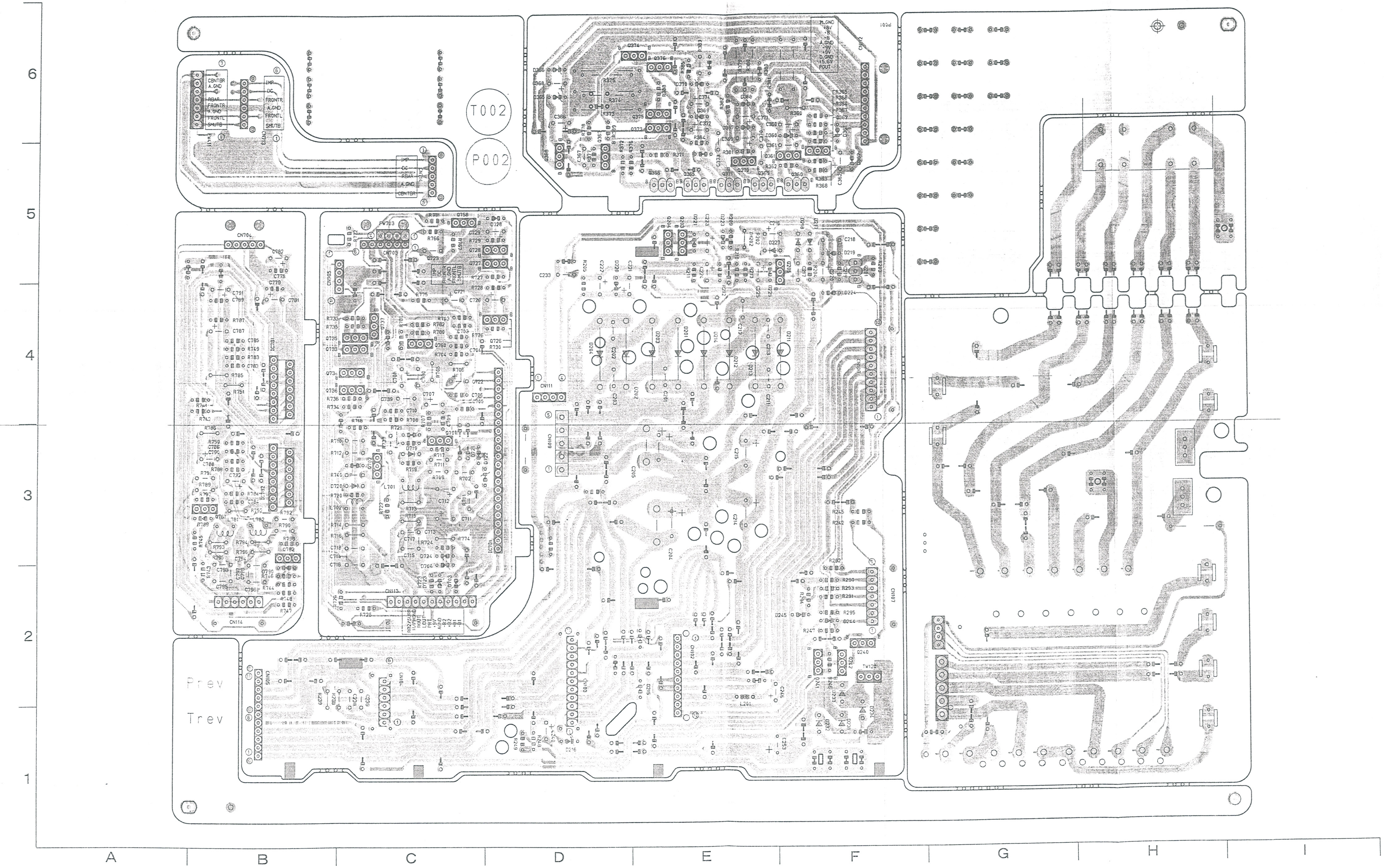

6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
FMMW1047-002

CA-MXJ55R/CA-MXJ530R

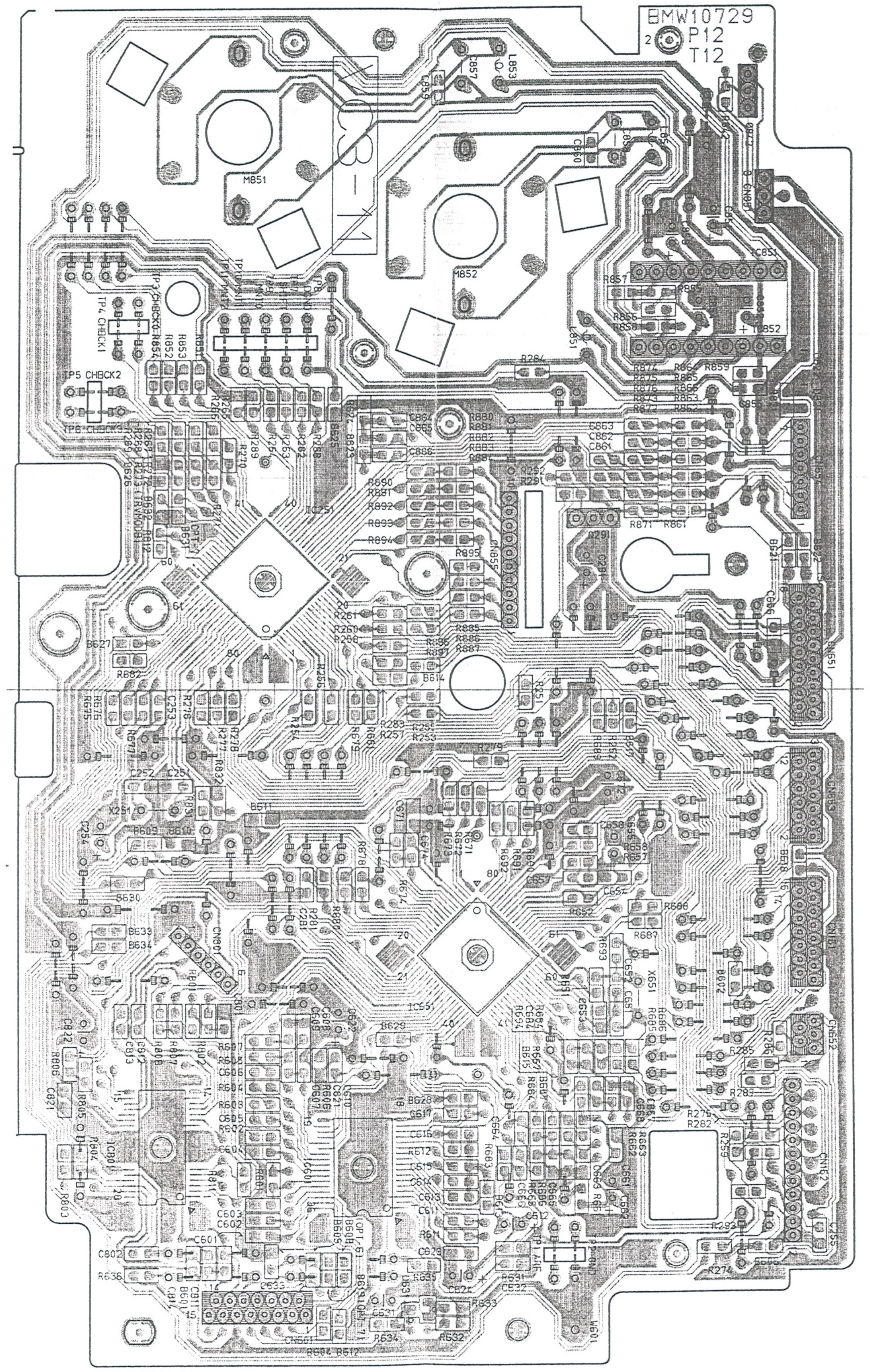
Function, Tuner, Main Board


POLAR STEREO
CN421
IC6
IC8
IC7
CN422
VR100
MIX AMP
IC405
IC406
SA BASS
CN410
SOURCE SELECT
IC401
CD LPF
IC402
CN412
CN411
CN419
SP1 AMP VOCAL CANCEL
KARAOKE
IC404
IC403
PB MUTE
M.S. DETECTOR
CN416
IC542
SP1 BPF
CN413
IC561
CN417
IC2
IC1
TU1
CN420
CN414/415
PRB AMP OUTPUT
REC OUT
AUX IN
PROLOGIC
IC501
RDS
J499
BP001
1
2
3
4
5
6
A
B
C
D
E
F
G
H
I

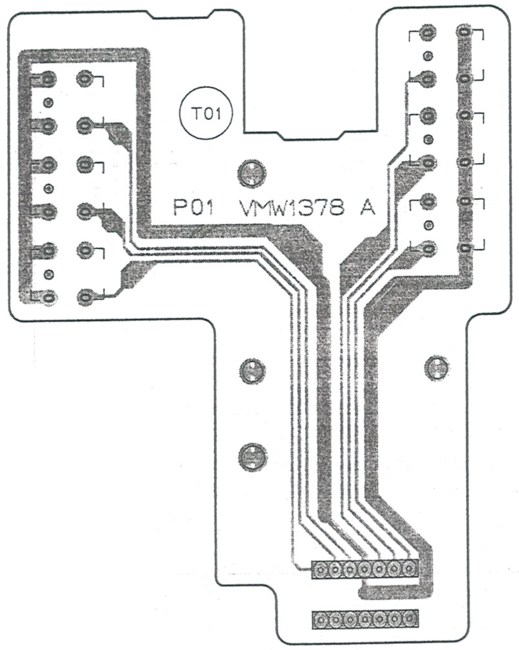
■ Regulator & Power Amplifier Board


6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
T002
P002
Prev
Trev
CENTER
A.GND
RBAR
FRONTR
FRONTL
SHUTB
IMP
DC
CN704
CN703
CN113
CN114
CN111
CN109
CN107
CN105
CN103
Q374
Q375
Q373
Q371
Q370
R375
R374
R373
C218
D219
D224
R245
R242
R292
R290
R293
R294
R295
Q244
R247
Q240
TW120
L201
R766
R728
R727
R730
R726
R704
R706
R710
R711
R712
R713
R714
R715
R716
R717
R718
R720
R721
R722
R724
R725
R733
R734
R735
R736
R740
R742
R744
R745
R747
R748
R749
R750
R751
R752
R753
R754
R759
R762
R763
R774
R776
R780
R782
R783
R784
R785
R786
R787
R788
R789
R790
R791
R792
R794
R795
R796
R798
C233
C215
C216
C205
C204
C214
C253
C246
C199
C202
C213
C226
C219
C221
C222
C225
C705
C706
C707
C709
C710
C711
C712
C713
C715
C716
C717
C718
C719
C721
C722
C726
C729
C776
C778
C779
C781
C782
C783
C785
C786
C787
C788
C789
C790
C791
C792
C793
C795
C796
D201
D202
D203
D204
D211
D213
D214
D215
D227
D245
D704
D720
D724
L701
L702
L781
L782
Q705
Q727
Q728
Q729
Q733
Q735
Q736
Q758
Q760
Q781
Q782
Q789
R380
R381
R383
R384
R385
R356
R358
R359
R360
R361
R362
R363
R364
R368
R371
R372
Q360
Q361
Q365
Q369
Q366
Q376
Q388
C360
C361
C365
C366
C368
C372
C373
M.GND
+6V
A.GND
D.GND
POUT

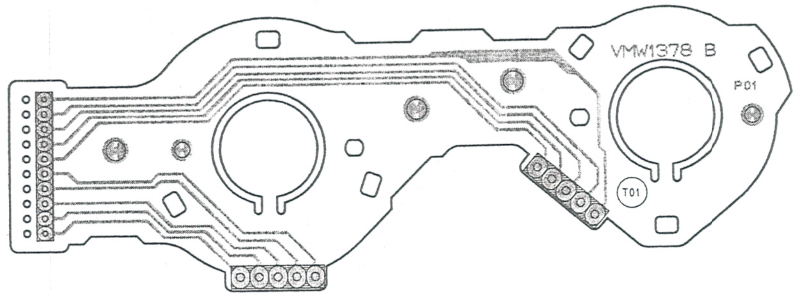
CD Servo Control Board


BMW10729
P12
T12
M851
M852
TP4 CHECK1
TP5 CHECK2
IC251
IC651

CD Tray section switch board


T01
P01 VMW1378 A

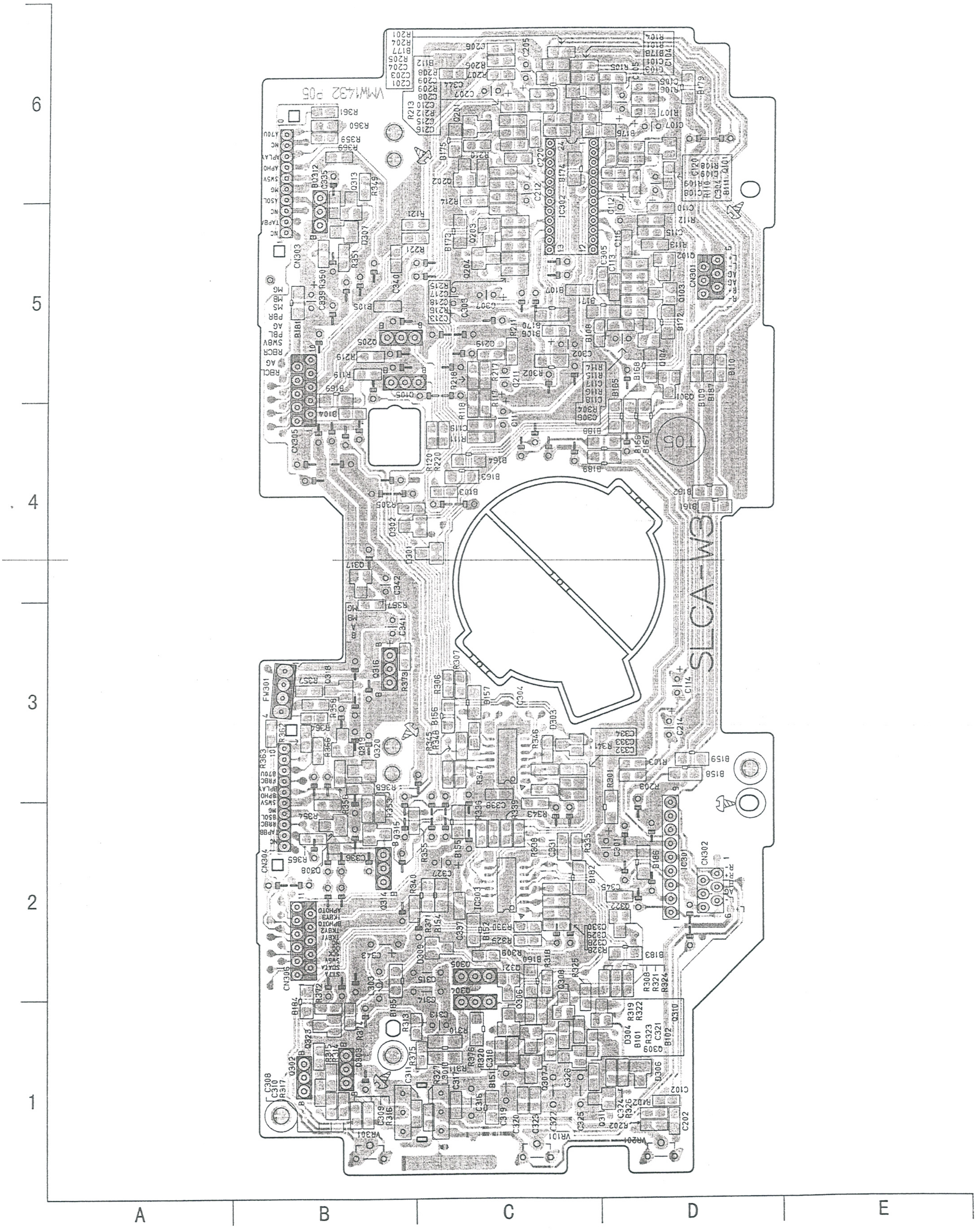
Cam switch board


VMW1378 B
P01
T01

6
5
4
3
2
1

A B C D E F G H I

Cassette Mechanism Board


6
5
4
3
2
1
A
B
C
D
E
SLCA-W3
VMW1432 P05
CN301
CN302
CN303
CN304
CN305
CN306
FW301
IC301
IC302
IC303
VR101
VR201
VR301

<<MEMO>>

PARTS LIST

[MX-J55R]
[CA-MXJ55R]
[CA-MXJ530R]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix(MX-J55R)
EE ····· Russian Europe

Area Suffix(CA-MXJ55R)
B ···················· U.K.
E ·· Continental Europe
EN ···· Northern Europe
EV ····· Eastern Europe

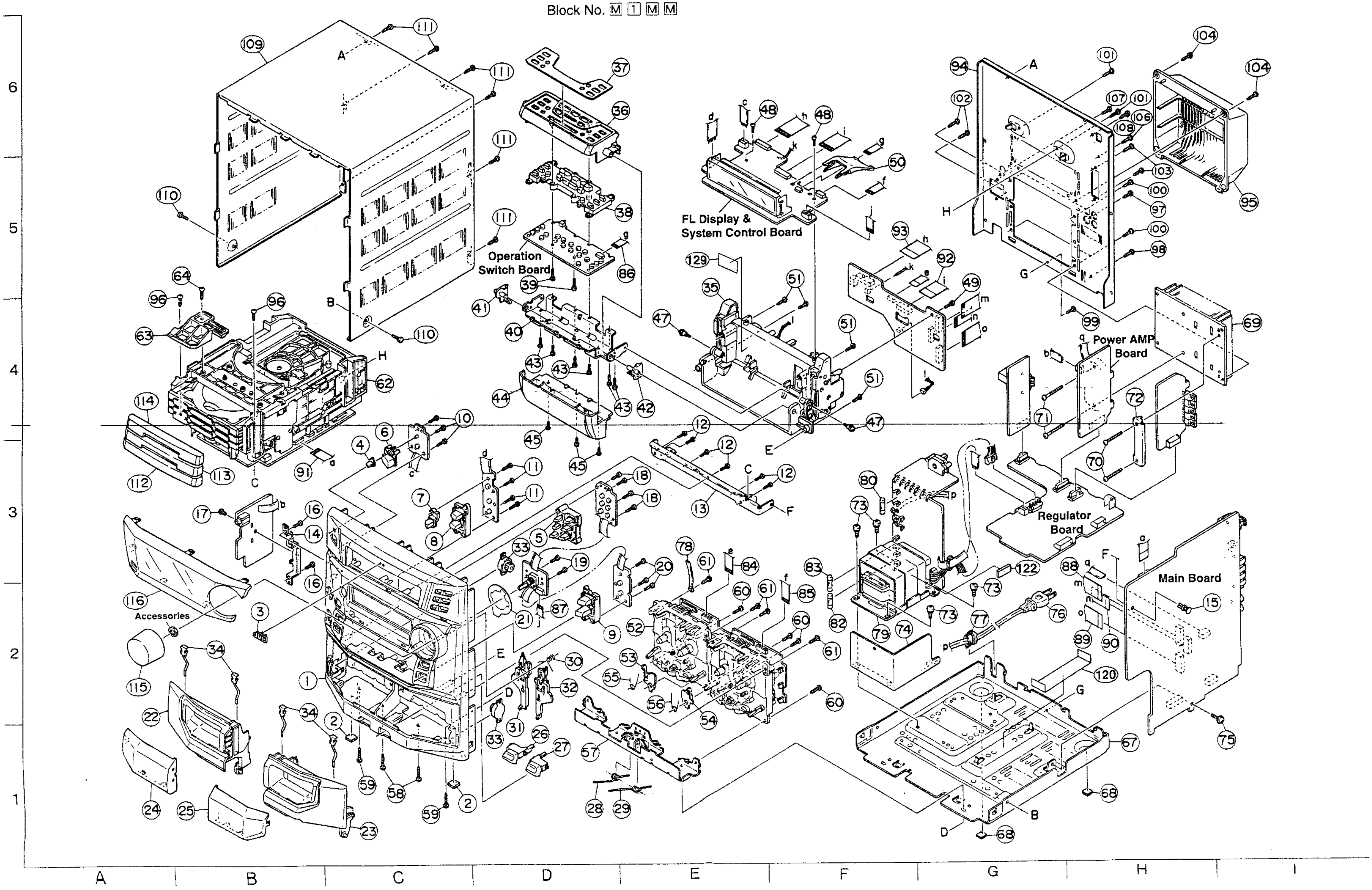
Area Suffix(CA-MXJ530R)
B ···················· U.K.
E ·· Continental Europe
EN ···· Northern Europe
EV ····· Eastern Europe

- Contents -

Exploded View of General Assembly and Parts List ·· 3-3
CD Changer Mechanism Ass'y and Parts List ·· 3-6
CD Mechanism Ass'y and Parts List ·· 3-8
Cassette Mechanism Ass'y and Parts List ··· 3-9
Electrical Parts List ··· 3-11
Packing Materials and Accessories Parts List ·· 3-26

Exploded View of General Assembly and Parts List

Block No. M 1 M M


Operation Switch Board
FL Display & System Control Board
Power AMP Board
Regulator Board
Main Board
Accessories
A
B
C
D
E
F
G
H
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
67
68
69
70
71
72
73
74
75
76
77
78
79
80
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
106
107
108
109
110
111
112
113
114
115
116
120
122
129
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6

■ Parts List(General Assembly)

Block No.M1MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	GV10010-018A	FRONT PANEL	1		
	2	E75896-001	SPACER	2		
	3	VJD5429-001	JVC MARK	1		
	4	GV40016-001A	STBY.INDICATOR	1		
	5	GV30047-008A	CD BUTTON ASSY	1		
	6	GV30029-006A	POWER BUTTON	1		
	7	GV30045-004A	PUSH BUTTON	1		
	8	GV20033-001A	SOURCE BUTTON(A)	1		
	9	GV20034-001A	SOURCE BUTTON(B)	1		
	10	QYSDSF2608Z	SCREW	3		
	11	QYSDSF2608Z	SCREW	4		
	12	QYSDSF2608Z	SCREW	6		
	13	GV30030-001A	STAY BRACKET	1		
	14	GV40030-001A	PHONE BRACKET	1		
	15	FMYH4004-001	PLASTIC RIVET	1		
	16	QYSDSF2608Z	SCREW	2		
	17	QYSBST3006Z	TH TAP SCREW	1		
	18	QYSDSF2608Z	SCREW	4		
	19	QYSDSF2608Z	SCREW	2		
	20	QYSDSF2608Z	SCREW	3		
	21	GV40043-001A	VOLUME SHEET	1		
	22	GV20022-004A	CASSETTE HOLDER(L)	1		
	23	GV20023-004A	CASSETTE HOLDER(R)	1		
	24	GV20024-001A	CASSETTE LENS(L)	1		
	25	GV20025-001A	CASSETTE LENS(R)	1		
	26	GV30026-004A	EJECT BUTTON(A)	1		
	27	GV30027-004A	EJECT BUTTON(B)	1		
	28	FMKW4009-001	HOLDER SPRING(A)	1		
	29	FMKW4010-001	HOLDER SPRING(B)	1		
	30	FMKW4011-001	SPRING	1		
	31	FMKS3002-003	EJECT LEVER(A)	1		
	32	FMKS3003-003	EJECT LEVER(B)	1		
	33	GV40034-001A	DAMPER	2		
	34	VKY4180-401	CASSETTE SPRING	4		
	35	GV10014-003A	CASE ASSY	1		
	36	GV30039-004A	MOVING PANEL(A)	1	CA-MXJ55R/MX-J55R	
		GV30039-006A	MOVING PANEL(A)	1	CA-MXJ530R	
	37	GV30040-017A	CONTROL SHEET	1		
	38	GV30041-007A	CONTROL BTN.ASSY	1		
	39	QYSDSF2608Z	SCREW	2		
	40	GV30042-002A	PANEL BRACKET	1		
	41	GV40028-001A	PANEL HOLDER(L)	1		
	42	GV40028-002A	PANEL HOLDER(R)	1		
	43	QYSDSF2608Z	SCREW	6		
	44	GV30043-004A	MOVING PANEL(B)	1	CA-MXJ55R/MX-J55R	
		GV30043-005A	MOVING PANEL(B)	1	CA-MXJ530R	
	45	QYSBST2606Z	T.SCREW	3		
	47	VKZ4341-204	SPECIAL SCREW	2		
	48	QYSDSF2608Z	SCREW	2		
	49	QYSDSF2608Z	SCREW	1		
	50	GV30054-001A	BOARD HOLDER	1		

■ Parts List(General Assembly)

Block No.M1MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	51	QYSSSF3012Z	SCREW	4		
	52	-------------	CASSETTE MECHA	1		
	53	FMKL4012-004	EJECT SAFETY(A)	1		
	54	FMKL4013-001	EJECT SAFETY(B)	1		
	55	FMKW4007-001	EJECT SPRING(A)	1		
	56	FMKW4008-001	EJECT SPRING(B)	1		
	57	GV20030-001A	HOLDER BRACKET	1		
	58	QYSBSG3010E	T.SCREW	2		
	59	QYSBSG3010E	T.SCREW	2		
	60	QYSBSG3010Z	T.SCREW	4		
	61	QYSBSF3010Z	SCREW	4		
	62	-------------	CD CHANGER MECHA	1		
	63	E309662-001SM	DISC STOPPER	1		
	64	QYSBSF3008Z	SCREW	1		
	67	GV10011-001A	CHASSIS BASE	1		
	68	E75896-006	FELT SPACER	2		
⚠	69	GV30044-002A	HEAT SINK	1		
	70	QYSBSG3014E	T.SCREW	2		
	71	QYSBSG3020E	TAPPING SCREW	2		
	72	GV40029-001A	LEAF SPRING	1		
	73	QYSDSTL4008Z	SPECIAL SCREW	4		
	74	LE30469-001A	SHIELD PLATE	1		
	75	QYSBSGG3008E	T.SCREW	1		
⚠	76	QMPK090-205-JN	POWER CORD	1		E,EE,EN,EV
⚠		QMPN090-200-JC	POWER CORD	1		B
	77	QZW0033-001	STRAIN RELIEF	1		
	78	VKZ4001-110S	WIRE HOLDER	1		
⚠	79	QQT0251-002	POWER TRANSFORMER	1	T001	
⚠	80	QMF51E2-1R25-J1	FUSE	1	F001	
⚠	82	QMF51E2-3R15-J1	FUSE	1	F101	
⚠	83	QMF51E2-3R15-J1	FUSE	1	F102	
	84	QUQ412-1014CJ	FLAT WIRE	1	FC854	
	85	QUQ412-1115DJ	FLAT WIRE	1	FC803	
	86	QUQ610-0915BJ	FLAT WIRE	1	FC921	
	87	QUQ412-1012CJ	FLAT WIRE	1	FC971	
	88	QUQ412-2109CJ	FLAT WIRE	1	FC857	
	89	QUQ412-2109CJ	FLAT WIRE	1	FC855	
	90	QUQ412-1712CJ	FLAT WIRE	1	FC856	
	91	QUQ110-1916BJ	FLAT WIRE	1	FC410	
	92	QUQ412-2112CJ	FLAT WIRE	1	FC801	
	93	QUQ412-2308CJ	FLAT WIRE	1	FC802	
	94	GV10013-019A	REAR PANEL	1	CA-MXJ55R	
		GV10013-021A	REAR PANEL	1	MX-J55R	
		GV10013-022A	REAR PANEL	1	CA-MXJ530R	
	95	E207356-002SM	REAR COVER	1		
	96	QYSBSG3008Z	T.SCREW	2		
	97	QYSBSGY3008E	SPECIAL SCREW	1		
	98	QYSBSGY3008E	SPECIAL SCREW	1		
	99	QYSBSGY3008E	SPECIAL SCREW	1		
	100	QYSBSGY3008E	SPECIAL SCREW	4		
	101	QYSBSGY3008E	SPECIAL SCREW	2		

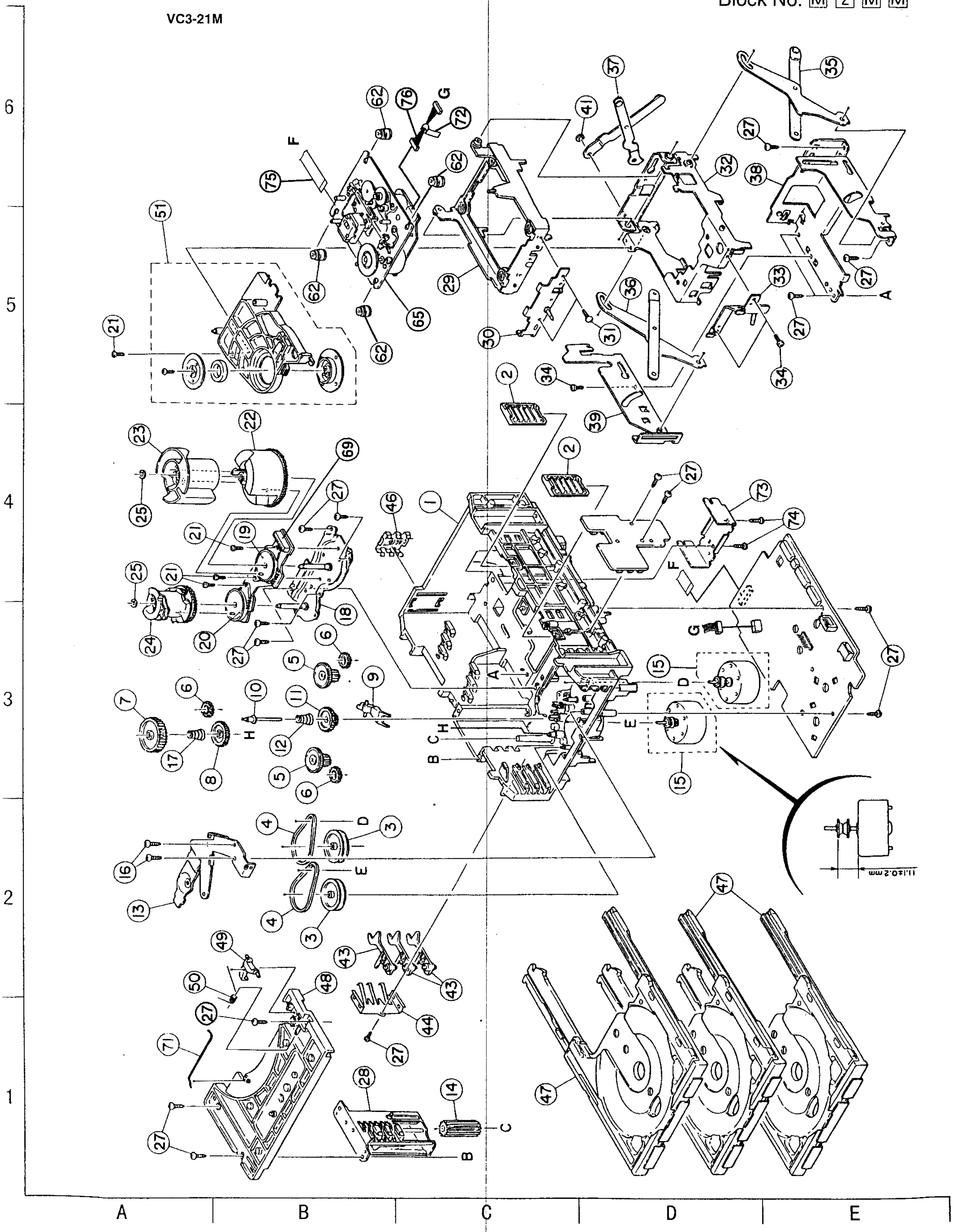
■ Parts List(General Assembly)

Block No.M1MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	102	QYSBSGY3008E	SPECIAL SCREW	2		
	103	QYSBSGY3008E	SPECIAL SCREW	2		
	104	QYSBSGY3008E	SPECIAL SCREW	2		
	106	QYSBSGY3008E	SPECIAL SCREW	1		
	107	QYSBSGY3008E	SPECIAL SCREW	1		
	108	QYSBSGY3008E	SPECIAL SCREW	1		
	109	GV10012-001A/S/	METAL COVER	1		
	110	QYSDSG3006M	TAPPING SCREW	2		
	111	QYSBSGY3008E	SPECIAL SCREW	6		
	112	GV30033-003A	CD FITTING	1	CA-MXJ55R/MX-J55R	
		GV30033-004A	CD FITTING	1	CA-MXJ530R	
	113	GV30034-002A	CD FITTING	1	CA-MXJ55R/MX-J55R	
		GV30034-003A	CD FITTING	1	CA-MXJ530R	
	114	GV30035-003A	CD FITTING	1	CA-MXJ55R/MX-J55R	
		GV30035-004A	CD FITTING	1	CA-MXJ530R	
	115	GV30028-004A	VOLUME KNOB	1		
	116	GV20026-005A	WINDOW SCREEN	1	CA-MXJ55R/MX-J55R	
		GV20026-003A	WINDOW SCREEN	1	CA-MXJ530R	
	120	GV40048-001A	PROTECT SHEET	1		
	122	FMYSH103-003	FELT SPACER	1		
	129	GV40059-001A	SPACER	1		

CD Changer Mechanism Ass'y and Parts List

Block No. M 2 M M


VC3-21M
6
5
4
3
2
1
A
B
C
D
E
62
76
G
72
F
75
62
51
62
65
62
21
29
30
31
37
41
35
27
32
38
27
33
36
27
34
34
A
2
39
2
23
22
69
27
73
74
25
21
19
27
46
1
F
21
25
18
24
20
27
6
5
9
G
15
D
27
7
6
10
11
12
17
8
H
A
E
15
C
H
B
5
6
4
D
3
16
E
13
4
3
11.1±0.2 mm
47
47
49
43
43
50
48
27
44
71
27
47
28
14
C
27
B

■Parts List (CD Changer Mechanism)

BLOCK NO. M2MM□□□□

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1144-003	CHASSIS		1		
	2	VKS3698-003	TRAY GUIDE		2		
	3	VKS5532-003	PULLEY GEAR		2		
	4	VKB3000-164	BELT		2		
	5	VKS5505-003	GEAR B		2		
	6	VKS5506-002	GEAR C		3		
	7	VKS5507-002	CROSS GEAR U		1		
	8	VKS5508-002	CROSS GEAR L		1		
	9	VKS5510-003	SELECT LEVER		1		
	10	VKH5769-001	S.G.SHAFT		1		
	11	VKS5511-002	SELECT GEAR		1		
	12	VKW5155-003	COMP.SPRING	FOR SELECT GEAR	1		
	13	VKM3846-002	GEAR BRACKET		1		
	14	VKS5509-002MM	CYLINDER GEAR		1		
	15	MSN5D257A-SA2	D.C.MOTOR ASS'Y		2		
	16	QYSPSPD2616Z	SCREW	FOR MOTOR	2		
	17	LV40612-001A	COMP.SPRING		1		
	18	VKM3825-00AMM	C.G.BASE ASS'Y		1		
	19	VKZ3172-00ASS	CAM SW. R ASS'Y		1		
	20	VKZ3173-00ASS	CAM SW. L ASS'Y		1		
	21	QYSPST2606Z	SCREW		4		
	22	VKS2263-002MM	CAM R1		1		
	23	VKS2264-002MM	CAM R2		1		
	24	VKS2265-002MM	CAM GEAR L		1		
	25	WDL316050MM	SLIT WASHER		2		
	27	QYSBSF2608Z	T.SCREW		16		
	28	VKS3702-00FMM	DRIVE UNIT		1		
	29	VKS2247-004	MECHA HOLDER A		1		
	30	VKL7767-00B	BRACKET ASS'Y		1		
	31	QYSBSF2606Z	SCREW	FOR BRACKET	2		
	32	VKM3860-00A	M.HOLDER B AS'Y		1		
	33	VKL7802-00C	M.HOLDER C AS'Y		1		
	34	QYSDST2604Z	SCREW		3		
	35	VKL7810-00A	LIFTER ASS'Y R		1		
	36	VKL7811-00A	LIFTER ASS'Y L		1		
	37	VKL7812-00A	LIFTER ASS'Y H		1		
	38	VKL2732-002	LIFTER BASE		1		
	39	VKM3857-001	LIFTER BRACKET		1		
	41	WDL266035-2	SLIT WASHER		1		
	43	VKS5514-002MM	LOCK LEVER		3		
	44	VKY3133-002MM	RETURN SPRING		1		
	46	VKY3134-003MM	CLICK SPRING		1		
	47	VKS2252-00E	TRAY ASS'Y		3		
	48	VKS2250-003	TOP BRACKET		1		
	49	VKS5515-002	S.TRAY STOPPER		1		
	50	VKW5156-004	TORSION SPRING		1		
	51	VKS3703-00F	CLAMPER ASS'Y		1		
	62	LV40761-003A	INSULATOR		4		
	65	---------------	CD MECHA		1		
	69	QGB2012J1-10	CONNECTOR		1		
	71	VKW5187-001	ROD		1		
	72	VYSA1R2-033	SPACER		1		
	73	LE30611-001A	C.B HOLDER	FOR CD CB	1		
	74	QYSBSF3008Z	SCREW	FOR HOLDER	2		
	75	QUQ610-1509AJ	FLAT WIRE	TRAVERSE 15	1		
	76	EWS176-008	FLAT WIRE	TRAVERSE 6	1		

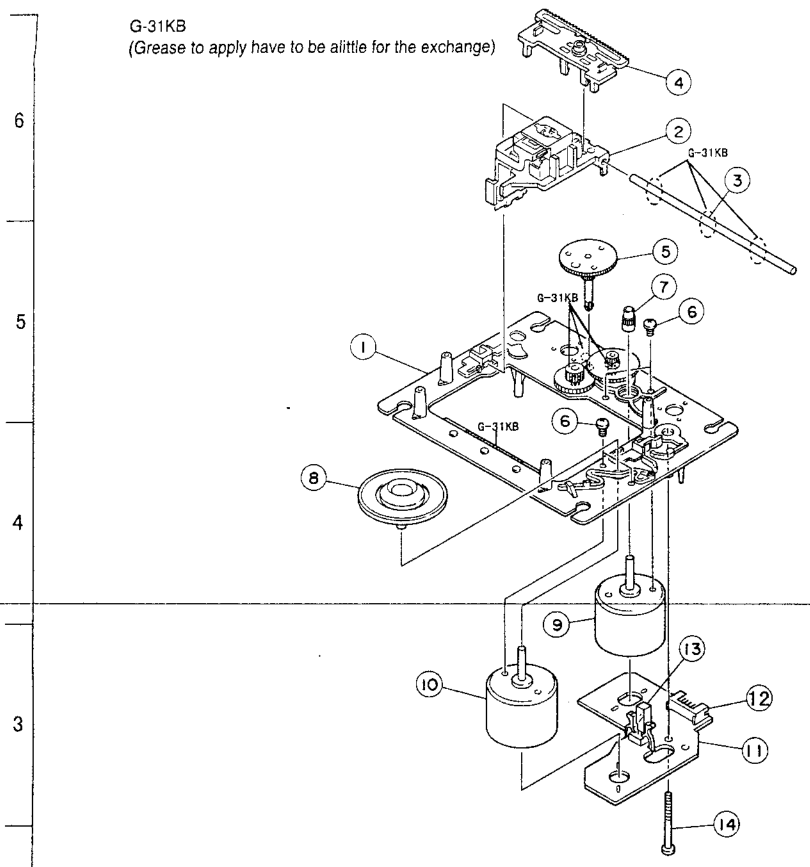
CD Mechanism Ass'y and Parts List

■ Grease Point

Block No. M3MM

No. EXL-M7TB

G-31KB
(Grease to apply have to be alittle for the exchange)



6
5
4
3
2
1
4
2
G-31KB
3
5
7
G-31KB
6
1
G-31KB
6
8
9
13
10
12
11
14

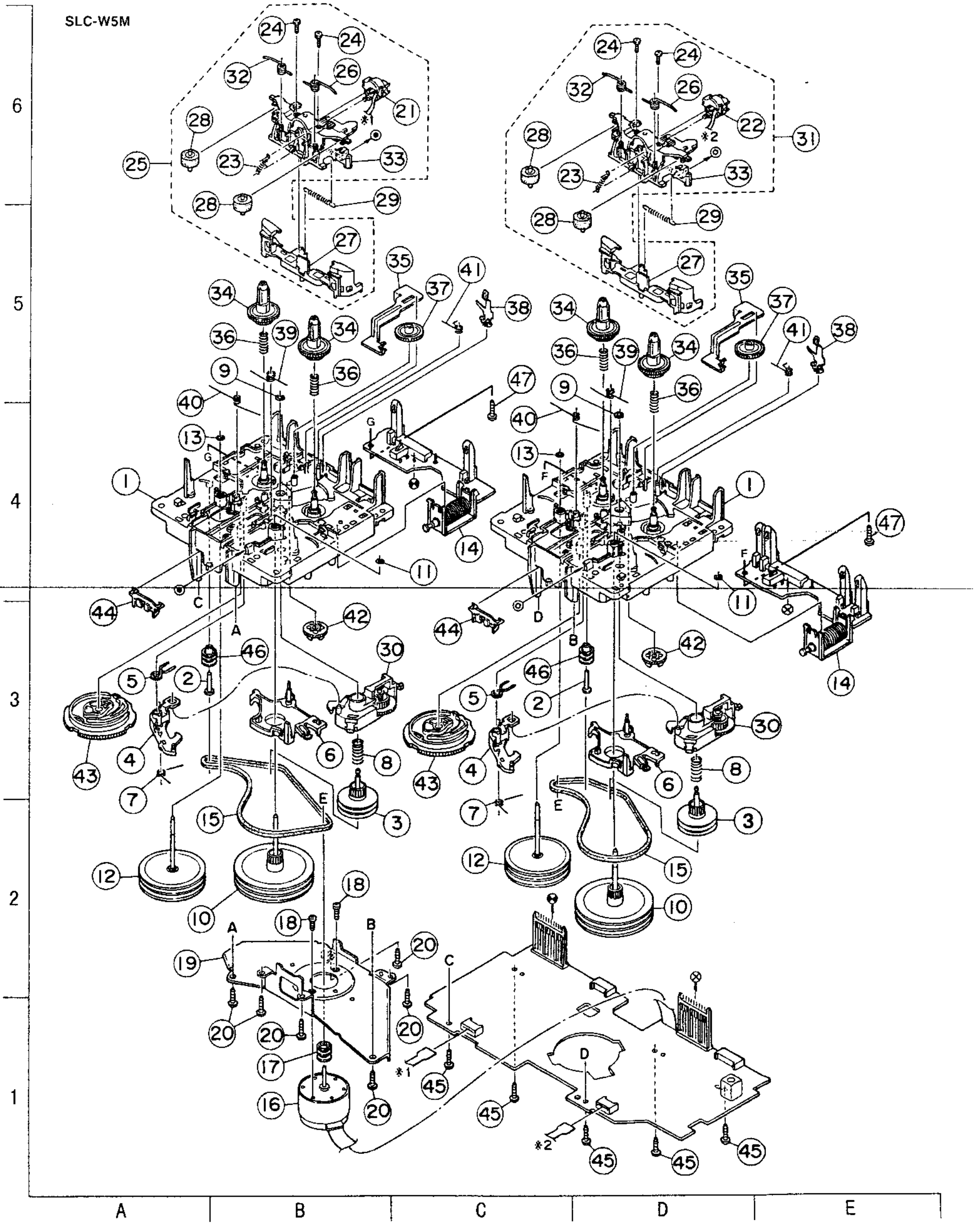
■CD Mechanism Assembly Parts List

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	E102731-221SMKP	MECHA. BASE ASSY	1		
	2	OPTIMA-7B	OPTICAL PICK UP	1		
	3	E406777-002SMKP	CD SHAFT	1		
	4	HQN300031-001PK	CD RACK	1		
	5	E307745-441SMKP	MECHA GEAR	1		
	6	QYSDSP2003N	SCREW	4		
	7	E406750-441SM	PINION GEAR	1		
	8	EPB309173PKA	TURN TABLE	1		
	9	E406784-001	FEED MOTOR	1		
	10	E406783-001	SPPINDLE MOTOR	1		
	11	EMW10190-441	P. C. BOARD	1		
	12	QGA2001F1-06	6P PLUG ASSY	1		
	13	QSW0506-001	LEAF SWITCH	1		
	14	E75832-221SS	SCREW	1		

A B C D E

Cassette Mechanism Ass'y and Parts List

Block No. M4MM



SLC-W5M
6
5
4
3
2
1
24
24
32
26
21
28
25
23
33
28
29
27
24
24
32
26
22
*2
28
23
33
31
28
29
27
35
37
41
38
34
36
39
34
36
35
37
41
38
34
36
39
34
36
9
40
47
13
G
1
9
40
13
F
G
1
14
11
47
F
44
C
A
42
30
46
5
2
D
B
44
11
42
46
5
2
30
14
43
4
6
8
7
15
E
3
43
4
6
8
7
E
3
12
10
18
12
15
10
19
A
18
B
20
C
20
20
20
17
16
20
*1
45
45
D
*2
45
45
45
A
B
C
D
E

■ Parts List (Cassette Mechanism)

BLOCK NO. M4MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	1	VKS1165-00H	CHASSIS B.ASS'Y		2		
	2	VKH5786-002	SHAFT		2		
	3	VKS5603-00D	MAIN PULLEY ASY		2		
	4	VKS3785-001MM	FR ARM		2		
	5	VKW5284-002	SWING SPRING		2		
	6	VKS2278-003	TRIGGER ARM		2		
	7	VKW5301-001	FR SPRING		2		
	8	VKW5266-001	ELEVATOR SPRING		2		
	9	WDL214025	WASHER		2		
	10	VKF3205-00B	F.WHEEL ASSY(R)		2		
	11	WDL183425	SLIT WASHER		2		
	12	VKF3207-00B	F.WHEEL ASSY(L)		2		
	13	WDL173525-6	SLIT WASHER		2		
	14	VKZ3174-00A	DC SOLENOID		2		
	15	VKB3000-182	CAPSTAN BELT(B)		2		
	16	MSI-5U2LWA	D.C.MOTOR ASS'Y		1		
	17	VKR4761-001	MOTOR PULLEY		1		
	18	QYSPSP2604Z	SCREW		2		
	19	VKM3907-001	JOINT BRACKET		1		
	20	QYSBSF2608Z	T.SCREW		6		
	21	VGH0424-037	P.B.HEAD		1		
	22	VGH0425-544	R/P&E HEAD		1		
	23	VKW5302-001	HEAD SPRING		2		
	24	VKZ4730-001	SPECIAL SCREW		4		
	25	VKS2279-00C	HEAD MOUNT ASSY		1		
	26	VKW5299-002	PIN ROL.SP.(R)		2		
	27	VKS2277-005	DIRECTION LEVER		2		
	28	VKP4233-00A	PINCH ROL. ASSY		4		
	29	VKW5285-001	RETURN SPRING		2		
	30	VKS3786-00G	CLUTCH ASS'Y		2		
	31	VKS2275-00C	HEAD MOUNT ASSY		1		
	32	VKW5300-002	PIN ROL.SP.(L)		2		
	33	VKS1167-001	HEAD MOUNT BASE		2		
	34	VKS2274-002	REEL GEAR		4		
	35	VKM3906-003	PLAY SW LEVER		2		
	36	VKW5286-002	B.T. SPRING		4		
	37	VKS5559-001	PLAY IDLE GEAR		2		
	38	VKY3149-002	CASSETTE SP.		2		
	39	VKW5279-001	HEAD BASE SP(R)		2		
	40	VKW5280-001	HEAD BASE SP(L)		2		
	41	VKW5296-001	EARTH SPRING		2		
	42	VKS5597-00A	FR GEAR ASS'Y		2		
	43	VKS1166-003	CONTROL CAM		2		
	44	VKS5577-001	FPC HOLDER		2		
	45	QYSBSF2608Z	T.SCREW	FOR P.W.B.	5		
	46	VKR4749-001	IDLE PULLEY		2		
	47	QYSBSF2006Z	SCREW		2		

Block No.01

■ Electrical Parts List(Power AMP Board)

⚠	Item	Parts Number	Description	Area
		I.C.S		
⚠	IC701	STK411-210E	I.C(HYBRID)	
		DIODES		
⚠	D201	1N5402M-20	DIODE	
⚠	D202	1N5402M-20	DIODE	
⚠	D203	1N5402M-20	DIODE	
⚠	D204	1N5402M-20	DIODE	
⚠	D211	30DF2-FC	DIODE	
⚠	D212	30DF2-FC	DIODE	
⚠	D213	30DF2-FC	DIODE	
⚠	D214	30DF2-FC	DIODE	
⚠	D217	1SR35-100A-T5	SI DIODE	
⚠	D218	1SR35-100A-T5	SI DIODE	
	D219	MTZJ33C-T2	Z DIODE I M	
	D220	MTZJ9.1C-T2	ZENER DIODE	
	D221	MTZJ5.1B-T2	ZENER DIODE	
	D223	1SS133-T2	SI.DIODE	
	D224	1SS133-T2	SI.DIODE	
	D225	1SS133-T2	SI.DIODE	
⚠	D227	1SR35-100A-T5	SI DIODE	
	D244	MTZJ2.4B-T2	Z.DIODE I.M	
	D245	1SS133-T2	SI.DIODE	
	D360	MTZJ5.1B-T2	ZENER DIODE	
	D361	MTZJ11C-T2	ZENER DIODE	
	D362	MTZJ6.8C-T2	ZENER DIODE	
	D365	MTZJ9.1B-T2	ZENER DIODE	
	D366	MTZJ11C-T2	ZENER DIODE	
	D367	MTZJ10C-T2	ZENER DIODE	
	D368	MTZJ11C-T2	ZENER DIODE	
	D369	MTZJ10C-T2	ZENER DIODE	
	D370	MTZJ11C-T2	ZENER DIODE	
	D703	MTZJ8.2C-T2	ZENER DIODE	
	D704	MTZJ8.2C-T2	ZENER DIODE	
	D719	1SS133-T2	SI.DIODE	
	D720	1SS133-T2	SI.DIODE	
	D721	MTZJ8.2C-T2	ZENER DIODE	
	D722	MTZJ8.2C-T2	ZENER DIODE	
	D723	MTZJ33C-T2	Z DIODE I M	
	D724	MTZJ33C-T2	Z DIODE I M	
	D728	1SS133-T2	SI.DIODE	
		TRANSISTORS		
⚠	Q201	2SB1274/RS/	TRANSISTOR	
	Q203	KRC107M-T	DIGITAL TRANSISTOR	
	Q204	KRC107M-T	DIGITAL TRANSISTOR	
	Q205	KRC107M-T	DIGITAL TRANSISTOR	
	Q240	KTC3199/GL/-T	TR I/M	
⚠	Q360	2SD2061/EF/	SI.TRANSISTOR	
	Q361	KTC3199/GL/-T	TR I/M	
	Q362	KTC3199/GL/-T	TR I/M	
⚠	Q365	2SD2061/EF/	SI.TRANSISTOR	
⚠	Q366	2SD2061/EF/	SI.TRANSISTOR	
	Q367	KTA1267/YG/-T	TRANSISTOR	
	Q368	KTC3199/GL/-T	TR I/M	
⚠	Q369	2SD2061/EF/	SI.TRANSISTOR	
	Q370	KTC3199/GL/-T	TR I/M	
⚠	Q371	2SB1565/EF/	SI.TRANSISTOR	
	Q373	KRA104M-T	DIGITAL TRANSISTOR	
	Q374	KRC104M-T	DIGITAL TRANSISTOR	
	Q375	KRC104M-T	DIGITAL TRANSISTOR	
	Q376	KRA104M-T	DIGITAL TRANSISTOR	
	Q701	2SA1038S/SE/-T	SI.TRANSISTOR	
	Q702	2SA1038S/SE/-T	SI.TRANSISTOR	
	Q726	2SC2389S/SE/-T	SI.TRANSISTOR	
	Q727	2SA1038S/SE/-T	SI.TRANSISTOR	
	Q728	KTC3199/GL/-T	TR I/M	
	Q733	2SC3576-JVC-T	SI.TRANSISTOR	
	Q734	2SC3576-JVC-T	SI.TRANSISTOR	
	Q735	2SC3576-JVC-T	SI.TRANSISTOR	
	Q736	2SC3576-JVC-T	SI.TRANSISTOR	
	Q737	KRA111M-T	DIGITAL TRANSISTOR	
	Q758	2SA1038S/S/-T	TR.I.M	
	Q760	2SK301/PQ/-T	F.E.T.	
		CAPACITORS		
	C201	QFV82AJ-104	0.1MF 100V THIN FILM CA	
	C202	QFV82AJ-104	0.1MF 100V THIN FILM CA	
	C203	QFV82AJ-104	0.1MF 100V THIN FILM CA	
⚠	C204	QEZ0461-478	4700MF E CAP.	
⚠	C205	QEZ0461-478	4700MF E CAP.	
	C211	QFVJ1HJ-104Z	0,1MF 50V TF CAP.	
	C212	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C213	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
⚠	C214	QETM1VM-228J7	2200MF 35V E.CAP.	
⚠	C215	QETM1VM-228J7	2200MF 35V E.CAP.	
	C216	QETN1VM-107Z	100MF 35V E.CAP.	
	C217	QETN1JM-476Z	47MF 63V E.CAP.	
	C218	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C219	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C220	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C221	EETB1HM-475E	4.7MF 50V E.CAP.	
	C222	EETB1HM-475E	4.7MF 50V E.CAP.	
	C223	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C224	EETB1HM-105E	1MF 50V E.CAP.	
	C233	QFLM1HJ-103Z	0.01MF 50V M CAP.	
	C240	QETC1HM-224Z	0.22MF 50V AL E.CAP.	
	C360	EETC1EM-226ZE	22MF 25V E.CAP.	
	C361	QCF31HZ-103Z	0.01MF 50V C CAP.	
	C362	EETC1EM-226ZE	22MF 25V E.CAP.	
	C366	EETC1EM-226ZE	22MF 25V E.CAP.	
	C367	QCF31HZ-103Z	0.01MF 50V C CAP.	
	C368	EETC1EM-226ZE	22MF 25V E.CAP.	
	C369	EETC1EM-226ZE	22MF 25V E.CAP.	
	C370	QCF31HZ-103Z	0.01MF 50V C CAP.	
	C371	EETC1EM-226ZE	22MF 25V E.CAP.	
	C372	EETC1EM-226ZE	22MF 25V E.CAP.	
	C373	QCF31HZ-103Z	0.01MF 50V C CAP.	
	C374	EETC1EM-226ZE	22MF 25V E.CAP.	
	C703	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C704	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C705	QCSB1HJ-220	22PF 50V CER.CAP.	
	C706	QCSB1HJ-220	22PF 50V CER.CAP.	
	C707	QETC1EM-476ZM	47MF 25V E.CAP.	
	C708	QETC1EM-476ZM	47MF 25V E.CAP.	
	C709	QCSB1HJ-100Y	10PF 50V CER.CAP.	
	C710	QCSB1HJ-100Y	10PF 50V CER.CAP.	
	C711	QETN1JM-476Z	47MF 63V E.CAP.	
	C712	QETN1JM-476Z	47MF 63V E.CAP.	
	C713	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C714	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C715	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C716	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C721	QTE1V06-106Z	AL E.CAP.	
	C722	QTE1V06-106Z	AL E.CAP.	
	C723	QFVJ1HJ-474Z	0.47MF 50V CAP.	
	C726	EETB1EM-106E	10MF 25V E.CAP.	
	C729	EETB1CM-476	47MF 16V E.CAP.	
	C739	QFLM1HJ-103Z	0.01MF 50V M CAP.	
	C780	QFLM1HJ-823Z	0.082MF 50V MYLAR CAP.	
	C799	QDYB1CM-103Y	0.01MF 16V CER.CAP.	EE
		QFLM1HJ-103Z	0.01MF 50V M CAP.	B,E,EN,EV
		RESISTORS		
	R203	QRE141J-332Y	3.3K 1/4W C RES.	
	R204	QRE141J-223Y	22K 1/4W C RES.	
	R205	QRE141J-104Y	100K 1/4W C RES.	
	R209	QRE141J-103Y	10K 1/4W CARBON RES.	

■ Electrical Parts List(Power AMP Board)

⚠	Item	Parts Number	Description	Area
	R210	QRE141J-472Y	4.7K 1/4W C RES.	
	R211	QRE141J-182Y	1.8K 1/4W C RES.	
	R215	QRE141J-473Y	47K 1/4W C RES.	
	R216	QRE141J-473Y	47K 1/4W C RES.	
	R242	QRE141J-222Y	2.2K 1/4W C RES.	
	R245	QRE141J-222Y	2.2K 1/4W C RES.	
	R247	QRE141J-222Y	2.2K 1/4W C RES.	
	R248	QRE141J-473Y	47K 1/4W C RES.	
	R249	QRE141J-153Y	15K 1/4W C RES.	
	R290	QRE141J-102Y	1K 1/4W C RES.	
	R291	QRE141J-102Y	1K 1/4W C RES.	
	R292	QRE141J-102Y	1K 1/4W C RES.	
	R293	QRE141J-102Y	1K 1/4W C RES.	
	R294	QRE141J-103Y	10K 1/4W CARBON RES.	
	R295	QRE141J-183Y	18K 1/4W CARBON RES.	
	R299	QRL012J-332	3.3K 1W UNF.OMF.RES.	
⚠	R360	QRZ9042-2R2X	2.2 F.RES. I.M	
⚠	R361	QRZ9042-2R2X	2.2 F.RES. I.M	
	R362	QRE141J-331Y	330 1/4W C RES.	
	R363	QRE141J-331Y	330 1/4W C RES.	
	R364	QRE141J-122Y	1.2K 1/4W C RES.	
	R365	QRE141J-561Y	560 1/4W C RES.	
	R366	QRE141J-561Y	560 1/4W C RES.	
	R367	QRE141J-122Y	1.2K 1/4W C RES.	
	R368	QRE141J-331Y	330 1/4W C RES.	
	R371	QRE141J-4R7Y	4.7 1/4W C RES.	
	R372	QRE141J-4R7Y	4.7 1/4W C RES.	
⚠	R373	QRZ9021-220	22 FUSIBLE RES.	
⚠	R374	QRZ9021-220	22 FUSIBLE RES.	
⚠	R375	QRZ9021-220	22 FUSIBLE RES.	
	R376	QRE141J-221Y	220 1/4W C RES.	
	R377	QRE141J-681Y	680 1/4W CARBON RES.	
	R378	QRE141J-182Y	1.8K 1/4W C RES.	
	R381	QRE141J-272Y	2.7K 1/4W C RES.	
	R382	QRE141J-562Y	5.6K 1/4W C RES.	
	R384	QRE141J-272Y	2.7K 1/4W C RES.	
	R385	QRE141J-562Y	5.6K 1/4W C RES.	
⚠	R388	QRE141J-103Y	10K 1/4W CARBON RES.	
	R389	QRE141J-103Y	10K 1/4W CARBON RES.	
	R701	QRL01DJ-101X	100 1W OMF RES.	
	R702	QRL01DJ-101X	100 1W OMF RES.	
	R703	QRE141J-563Y	56K 1/4W C RES.	
	R704	QRE141J-563Y	56K 1/4W C RES.	
	R705	QRJ146J-681X	680 1/4W UNF C RES I/	
	R706	QRJ146J-681X	680 1/4W UNF C RES I/	
	R707	QRE141J-563Y	56K 1/4W C RES.	
	R708	QRE141J-563Y	56K 1/4W C RES.	
	R709	QRT01DJ-R22X	0.22 1W UNF.MF.RES.I	
	R710	QRT01DJ-R22X	0.22 1W UNF.MF.RES.I	
	R711	QRT01DJ-R22X	0.22 1W UNF.MF.RES.I	
	R712	QRT01DJ-R22X	0.22 1W UNF.MF.RES.I	
	R713	QRJ146J-100X	10 1/4W UNF.CARBON R	
	R714	QRJ146J-100X	10 1/4W UNF.CARBON R	
	R715	QRJ146J-100X	10 1/4W UNF.CARBON R	
	R716	QRJ146J-100X	10 1/4W UNF.CARBON R	
	R717	QRE141J-122Y	1.2K 1/4W C RES.	
	R718	QRE141J-122Y	1.2K 1/4W C RES.	
	R719	QRE141J-223Y	22K 1/4W C RES.	
	R720	QRE141J-223Y	22K 1/4W C RES.	
	R721	QRE141J-103Y	10K 1/4W CARBON RES.	
	R722	QRE141J-103Y	10K 1/4W CARBON RES.	
	R723	QRE141J-392Y	3.9K 1/4W C RES.	
	R724	QRE141J-392Y	3.9K 1/4W C RES.	
	R725	QRE141J-823Y	82K 1/4W C RES.	
	R726	QRE141J-104Y	100K 1/4W C RES.	
	R727	QRE141J-104Y	100K 1/4W C RES.	
	R728	QRE141J-103Y	10K 1/4W CARBON RES.	
	R729	QRE141J-104Y	100K 1/4W C RES.	
	R730	QRE141J-103Y	10K 1/4W CARBON RES.	
	R733	QRE141J-472Y	4.7K 1/4W C RES.	
	R734	QRE141J-472Y	4.7K 1/4W C RES.	
	R735	QRE141J-472Y	4.7K 1/4W C RES.	
	R736	QRE141J-472Y	4.7K 1/4W C RES.	
	R739	QRL01DJ-821X	820 1W OMF RES.	
	R740	QRL01DJ-821X	820 1W OMF RES.	
	R766	QRE141J-333Y	33K 1/4W C RES.	
	R767	QRE141J-683Y	68K 1/4W C RES.	
	R771	QRE141J-222Y	2.2K 1/4W C RES.	
	R772	QRE141J-103Y	10K 1/4W CARBON RES.	
	R774	QRJ146J-100X	10 1/4W UNF.CARBON R	
	R775	QRE141J-102Y	1K 1/4W C RES.	
	R776	QRE141J-102Y	1K 1/4W C RES.	
	R780	QRE141J-105Y	1M 1/4W C RES.	
	R781	QRE141J-392Y	3.9K 1/4W C RES.	
	R782	QRE141J-475Y	4.7M 1/4W C RES.	
		OTHERS		
	L201	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	L701	QQLZ005-R45	INDUCTOR	
	L702	QQLZ005-R45	INDUCTOR	
	CN102	QGB2510J1-10	CONNECT TERMINAL	
	CN103	QGB2501J1-11	CONNECT TERMINAL	
	CN105	QGB2510J1-06	CONNECTOR	
	CN106	QGB2501K2-10	CONNECT TERMINAL	
	CN107	QGB2501K2-07	CONNECT TERMINAL	
	CN109	QGA3901C1-05	5P CONNECTOR	
	CN111	QGD2501C1-04Z	SOCKET ASSY	
	CN112	QGB2510K2-10	CONNECTOR	
	CN113	QGB2501K2-11	CONNECT TERMINAL	
	CN119	EWS285-202V	CONNECTOR WIRE ASSY	
	CN915	QGD2501C1-04Z	SOCKET ASSY	
	EP201	E409182-001SM	EARTH TERMINAL	
	FT111	QNG0020-001Z	FUSE CLIP	
	FT112	QNG0020-001Z	FUSE CLIP	
	FT511	QNG0020-001Z	FUSE CLIP	
	FT512	QNG0020-001Z	FUSE CLIP	
	FT521	QNG0020-001Z	FUSE CLIP	
	FT522	QNG0020-001Z	FUSE CLIP	
	FW101	QUM134-12DGZ4	FLAT WIRE	
	FW703	QUM134-14DGZ4	FLAT WIRE	
	TB101	QNZ0079-001Z	TAB I.M	
	TB102	QNZ0079-001Z	TAB I.M	
	TH202	QAD0095-4R7Z	POSITIVE THERMISTOR	

■ Electrical Parts List(Function,Tuner,Main Board)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC 1	LA1838	I.C(M)	
	IC 2	LC72136N	I.C(M)	
	IC 4	BU1923	I.C(M)	
	IC 6	BU4066BC	I.C(DIGI-MOS)	EE
	IC 7	BA15218	I.C(MONO-ANALOG)	EE
	IC 8	BA15218N	I.C(MONO-ANALOG)	EE
	IC401	TDA7439	I.C(M)	
	IC402	BA15218	I.C(MONO-ANALOG)	
	IC405	BA15218	I.C(MONO-ANALOG)	
	IC406	LA2650	I.C(MONO-ANALOG)	
	IC542	BA3835S	I.C(M)	
		DIODES		
	D 1	1SS133-T2	SI.DIODE	
	D 2	1SS133-T2	SI.DIODE	
	D 3	1SS133-T2	SI.DIODE	
	D 4	1SS133-T2	SI.DIODE	
	D 5	MTZJ5.6B-T2	ZENER DIODE	
	D 6	MTZJ5.6B-T2	ZENER DIODE	
	D 8	1SS133-T2	SI.DIODE	
	D100	RB721Q-T2	SI.DIODE	EE
	D101	RB721Q-T2	SI.DIODE	EE
	D102	1SS133-T2	SI.DIODE	EE
	D103	1SS133-T2	SI.DIODE	EE
	D104	1SS133-T2	SI.DIODE	EE
	D110	1SS133-T2	SI.DIODE	EE
	D111	1SS133-T2	SI.DIODE	EE
	D303	1SS133-T2	SI.DIODE	
	D305	1SS133-T2	SI.DIODE	
	D306	1SS133-T2	SI.DIODE	
	D307	1SS133-T2	SI.DIODE	
	D481	1SS133-T2	SI.DIODE	
	D482	1SS133-T2	SI.DIODE	
	D483	1SS133-T2	SI.DIODE	
	D484	1SS133-T2	SI.DIODE	
	D485	1SS133-T2	SI.DIODE	
	D501	MTZJ5.1B-T2	ZENER DIODE	
		TRANSISTORS		
	Q 1	2SC1923/O/-T	TR TAPE	
	Q 2	KRA107M-T	DIGITAL TRANSISTOR	
	Q 3	KTC3199/GL/-T	TR I/M	
	Q 4	KTC3199/GL/-T	TR I/M	
	Q 6	KRA107M-T	DIGITAL TRANSISTOR	
	Q 14	2SA1175/HFE/-T	TRANSISTOR	
	Q100	KTC3199/GL/-T	TR I/M	EE
	Q101	KRC102M-T	DIGITAL TRANSISTOR	EE
	Q102	KTC3199/GL/-T	TR I/M	EE
	Q103	KRC102M-T	DIGITAL TRANSISTOR	EE
	Q401	2SC3576-JVC-T	SI.TRANSISTOR	
	Q402	2SC3576-JVC-T	SI.TRANSISTOR	
	Q403	KRA102M-T	DIGITAL TRANSISTOR	
	Q405	2SC3576-JVC-T	SI.TRANSISTOR	
	Q406	2SC3576-JVC-T	SI.TRANSISTOR	
	Q407	2SA1175/HFE/-T	TRANSISTOR	
	Q408	KTC3199/GL/-T	TR I/M	
	Q409	KRC114M-T	SI.TRANSISTOR	
	Q410	KTC3199/GL/-T	TR I/M	
	Q411	KTC3199/GL/-T	TR I/M	
	Q481	2SC3576-JVC-T	SI.TRANSISTOR	
	Q482	2SC3576-JVC-T	SI.TRANSISTOR	
	Q483	KRA102M-T	DIGITAL TRANSISTOR	
		CAPACITORS		
	C 1	QCBB1HK-223Y	0.022MF 50V CER.CAP.	
	C 3	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 4	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C 5	EETC1CM-106ZJC	10MF 16V AL E.CAP.	EE
		QETN1AM-107Z	100MF 10V AL E.CAP.	B,E,EN,EV
	C 8	QCSB1HJ-150Y	15PF 50V CER.CAP.	
	C 9	QDXB1CM-272Y	2700PF 16V C.CAPA. I.M	
	C 10	EETC1HM-474ZJC	0.47MF 50V E.CAP.	
	C 12	QCSB1HJ-150Y	15PF 50V CER.CAP.	
	C 13	QFLM1HJ-473Z	0.047MF 50V M CAP.	B,E,EN,EV
	C 14	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 18	QCBB1HK-471Y	470PF 50V CER.CAP.	EE
		QDXB1CM-152Y	1500PF 16V C CAP.	B,E,EN,EV
	C 19	QCBB1HK-471Y	470PF 50V CER.CAP.	EE
		QDXB1CM-152Y	1500PF 16V C CAP.	B,E,EN,EV
	C 20	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C 21	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 22	QFVJ1HJ-274Z	0.27MF 50V CAP.	
	C 23	EETC1HM-105ZJC	1MF 50V E.CAP.	
	C 24	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C 25	QFLM1HJ-223Z	0.022MF 50V M CAP.	
	C 26	EETB1EM-106E	10MF 25V E.CAP.	
	C 27	EETB1HM-105E	1MF 50V E.CAP.	
	C 28	EETB1HM-105E	1MF 50V E.CAP.	
	C 29	QFLM1HJ-182Z	1800PF 50V MYLAR CAP.	
	C 30	QFLM1HJ-182Z	1800PF 50V MYLAR CAP.	
	C 31	QCSB1HJ-330Y	33PF 50V CER.CAP.	B,E,EN,EV
	C 32	QCGB1HK-102	1000PF 50V CER.CAP.	
	C 33	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 34	QETB1HM-474N	0.47MF 50V E.CAP.	
	C 35	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C 36	EETB1HM-105E	1MF 50V E.CAP.	
	C 37	QETB1HM-474N	0.47MF 50V E.CAP.	
	C 38	EETB1HM-105E	1MF 50V E.CAP.	
	C 39	QCBB1HK-223Y	0.022MF 50V CER.CAP.	
	C 40	QETC1EM-107Z	100MF 25V AL E.CAP.	
	C 41	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 42	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 43	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 51	QENC1HM-105Z	1MF 50V NP E.CAP.	EE
	C 52	QENC1HM-105Z	1MF 50V NP E.CAP.	EE
	C 60	QEKC1AM-107Z	100MF 10V E CAP.	
	C 61	QCSB1HJ-120Y	12PF 50V CER.CAP.	
	C 62	QCSB1HJ-120Y	12PF 50V CER.CAP.	
	C 63	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 65	QCGB1HK-102	1000PF 50V CER.CAP.	
	C 66	QCBB1HK-151	150PF 50V CER.CAP.	
	C 67	QCSB1HJ-270Y	27PF 50V CER.CAP.	
	C 68	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C 69	QFVJ1HJ-105Z	1MF 50V TF.CAPA. I.M	
	C 70	QDXB1CM-392Y	3900PF 16V C CAP.	
	C 71	EETB1CM-476	47MF 16V E.CAP.	
	C 72	QCGB1HK-102	1000PF 50V CER.CAP.	
	C 80	QCBB1HK-820Y	82PF 50V CER.CAP.	
	C 81	QCSB1HJ-470	47PF 50V CER.CAP.	
	C 82	EETC1CM-106ZJC	10MF 16V AL E.CAP.	
	C 83	QCBB1HK-473Y	0.047MF 50V CER.CAP.	
	C 84	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C 85	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C 86	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C 89	QCGB1HK-102	1000PF 50V CER.CAP.	
	C 90	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C 98	QCSB1HJ-100Y	10PF 50V CER.CAP.	
	C110	EETB1HM-105E	1MF 50V E.CAP.	EE
	C111	EETC1HM-335ZJC	3.3MF 50V E.CAP.	EE
	C113	QFP32AJ-103Z	0.01MF 100V PP CAP.	EE
	C114	QFP32AJ-103Z	0.01MF 100V PP CAP.	EE
	C115	QCBB1HK-271Y	270PF 50V CER.CAP.	EE
	C116	QCBB1HK-271Y	270PF 50V CER.CAP.	EE
	C117	EETB1HM-475E	4.7MF 50V E.CAP.	EE
	C118	EETB1HM-475E	4.7MF 50V E.CAP.	EE
	C119	QDXB1CM-222Y	2200PF 16V C CAP.	EE

■ Electrical Parts List(Function,Tuner,Main Board)

⚠	Item	Parts Number	Description	Area
	C120	QDXB1CM-222Y	2200PF 16V C CAP.	EE
	C121	QETN1AM-226Z	22MF 10V E CAP.	EE
	C122	QCS21HJ-221	220PF 50V CER.CAP.	EE
	C123	QCS21HJ-221	220PF 50V CER.CAP.	EE
	C124	QFLM1HJ-103Z	0.01MF 50V M CAP.	EE
	C125	EETB1HM-105E	1MF 50V E.CAP.	EE
	C126	EETB1HM-105E	1MF 50V E.CAP.	EE
	C127	EETB1HM-105E	1MF 50V E.CAP.	EE
	C128	EETC1HM-335ZJC	3.3MF 50V E.CAP.	EE
	C129	EETB1HM-105E	1MF 50V E.CAP.	EE
	C130	EETB1HM-105E	1MF 50V E.CAP.	EE
	C131	EETB1HM-105E	1MF 50V E.CAP.	EE
	C132	EETB1HM-105E	1MF 50V E.CAP.	EE
	C360	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C361	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C365	QETN1CM-227ZS	220MF 16V E.CAP.	
	C366	QETN1AM-108Z	1000MF 10V AL E.CAP.	
	C372	EETB1HM-475E	4.7MF 50V E.CAP.	
	C373	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C380	QETC1HM-224Z	0.22MF 50V AL E.CAP.	
	C381	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C382	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C383	QETC1EM-476ZM	47MF 25V E.CAP.	
	C385	EETB1HM-105E	1MF 50V E.CAP.	
	C386	QDGB1HK-681Y	680PF 50V C CAP.	
	C387	QFLM1HJ-153Z	0.015MF 50V M CAP.	
	C388	QDXB1CM-182Y	1800PF 16V C CAP.	
	C389	QCSB1HJ-330Y	33PF 50V CER.CAP.	
	C390	QETC1HM-224Z	0.22MF 50V AL E.CAP.	
	C398	QFLM1HJ-103Z	0.01MF 50V M CAP.	B,E,EN,EV
	C399	QFLM1HJ-103Z	0.01MF 50V M CAP.	B,E,EN,EV
	C401	QFLM1HJ-682Z	6800PF 50V M CAP.	
	C402	QFLM1HJ-682Z	6800PF 50V M CAP.	
	C403	QFLM1HJ-102Z	1000PF 50V MYLAR CAP.	
	C404	QFLM1HJ-102Z	1000PF 50V MYLAR CAP.	
	C407	QTE1V06-106Z	AL E.CAP.	
	C408	QTE1V06-106Z	AL E.CAP.	
	C411	EETB1EM-106E	10MF 25V E.CAP.	
	C412	EETB1EM-106E	10MF 25V E.CAP.	
	C413	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C414	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C415	EETB1EM-106E	10MF 25V E.CAP.	
	C416	EETB1EM-106E	10MF 25V E.CAP.	
	C417	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C418	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C419	EETB1EM-106E	10MF 25V E.CAP.	
	C420	QETN1AM-107Z	100MF 10V AL E.CAP.	
	C421	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C422	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C423	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C424	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C425	QFLM1HJ-183Z	0.018MF 50V M CAP.	
	C426	QFLM1HJ-183Z	0.018MF 50V M CAP.	
	C427	QFLM1HJ-223Z	0.022MF 50V M CAP.	
	C428	QFLM1HJ-223Z	0.022MF 50V M CAP.	
	C429	QFLM1HJ-562Z	5600PF 50V MYLAR CAP.	
	C430	QFLM1HJ-562Z	5600PF 50V MYLAR CAP.	
	C431	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C432	QETC1HM-225ZM	2.2MF 50V E.CAP.	
	C433	QTE1H39-225Z	2.2MF 50V E.CAP.	
	C434	QTE1H39-225Z	2.2MF 50V E.CAP.	
	C435	QETN1EM-106Z	10MF 25V E.CAP.	
	C436	QETN1EM-106Z	10MF 25V E.CAP.	
	C445	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C446	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C447	QTE1C39-106Z	10MF 16V E.CAP.	
	C448	QTE1C39-106Z	10MF 16V E.CAP.	
	C453	QCBB1HK-101Y	100PF 50V CER.CAP.	B,E,EN,EV
	C455	QCBB1HK-101Y	100PF 50V CER.CAP.	B,E,EN,EV
	C457	EETB1EM-106E	10MF 25V E.CAP.	
	C458	EETB1EM-106E	10MF 25V E.CAP.	
	C459	QFLM1HJ-333Z	0.033MF 50V MYLAR CAP.	
	C460	EETB1HM-475E	4.7MF 50V E.CAP.	
	C461	QETB1HM-474N	0.47MF 50V E.CAP.	
	C462	QFLM1HJ-393Z	0.039MF 50V M CAP.	
	C463	EETB1HM-475E	4.7MF 50V E.CAP.	
	C464	QETN1AM-107Z	100MF 10V AL E.CAP.	
	C465	QFLM1HJ-473Z	0.047MF 50V M CAP.	
	C466	QFLM1HJ-473Z	0.047MF 50V M CAP.	
	C467	EETB1HM-105E	1MF 50V E.CAP.	
	C468	QETC1EM-476ZM	47MF 25V E.CAP.	
	C477	EETB1HM-475E	4.7MF 50V E.CAP.	
	C481	QDGB1HK-102Y	1000PF 50V CER.CAP.	
	C482	QDGB1HK-102Y	1000PF 50V CER.CAP.	
	C483	QDXB1CM-222Y	2200PF 16V C CAP.	
	C484	QCBB1HK-101Y	100PF 50V CER.CAP.	EE
		QDXB1CM-222Y	2200PF 16V C CAP.	B,E,EN,EV
	C489	EETB1CM-476	47MF 16V E.CAP.	
	C490	EETB1CM-476	47MF 16V E.CAP.	
	C493	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C494	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C495	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C496	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C580	QDX31EM-473Z	0.047MF 25V C CAP.	
	C583	QFLM1HJ-103Z	0.01MF 50V M CAP.	B,E,EN,EV
	C584	QCS31HJ-391Z	390PF 50V C CAP.	B,E,EN,EV
	C586	QFLM1HJ-102Z	1000PF 50V C CAP.	B,E,EN,EV
	C587	EETB1EM-106E	10MF 25V E.CAP.	
	C589	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
		RESISTORS		
	R 1	QRE141J-102Y	1K 1/4W C RES.	
	R 2	QRE141J-121Y	120 1/4W C RES.	EE
		QRE141J-181Y	180 1/4W C RES.	B,E,EN,EV
	R 10	QRE141J-152Y	1.5K 1/4W CARBON RES.	
	R 12	QRE141J-102Y	1K 1/4W C RES.	
	R 13	QRE141J-104Y	100K 1/4W C RES.	
	R 15	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 16	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 19	QRE141J-393Y	39K 1/4W C RES.	
	R 20	QRE141J-331Y	330 1/4W C RES.	
	R 21	QRE141J-224Y	220K 1/4W C RES.	
	R 22	QRE141J-331Y	330 1/4W C RES.	
	R 24	QRE141J-433Y	43K 1/4W C RES.	
	R 25	QRE141J-272Y	2.7K 1/4W C RES.	
	R 26	QRE141J-273Y	27K 1/4W CARBON RES.	
	R 27	QRE141J-393Y	39K 1/4W C RES.	
	R 28	QRE141J-223Y	22K 1/4W C RES.	
	R 29	QRE141J-302Y	3K 1/4W C RES.	
	R 30	QRE141J-392Y	3.9K 1/4W C RES.	
	R 31	QRE141J-200Y	20 1/4W C RES ITM	
	R 32	QRE141J-331Y	330 1/4W C RES.	
	R 33	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 34	QRE141J-222Y	2.2K 1/4W C RES.	
	R 35	QRE141J-222Y	2.2K 1/4W C RES.	
	R 36	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 37	QRE141J-102Y	1K 1/4W C RES.	
	R 43	QRE141J-102Y	1K 1/4W C RES.	
	R 44	QRE141J-102Y	1K 1/4W C RES.	
	R 45	QRE141J-102Y	1K 1/4W C RES.	
	R 46	QRE141J-563Y	56K 1/4W C RES.	
	R 47	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 48	QRE141J-331Y	330 1/4W C RES.	
	R 49	QRE141J-102Y	1K 1/4W C RES.	
	R 52	QRE141J-472Y	4.7K 1/4W C RES.	

■ Electrical Parts List(Function,Tuner,Main Board)

⚠	Item	Parts Number	Description	Area
	R 54	QRE141J-472Y	4.7K 1/4W C RES.	
	R 55	QRE141J-182Y	1.8K 1/4W C RES.	
	R 56	QRE141J-332Y	3.3K 1/4W C RES.	
	R 57	QRE141J-102Y	1K 1/4W C RES.	
	R 60	QRE141J-102Y	1K 1/4W C RES.	
	R 61	QRE141J-102Y	1K 1/4W C RES.	
	R 64	QRE141J-473Y	47K 1/4W C RES.	
	R 65	QRE141J-222Y	2.2K 1/4W C RES.	
	R 66	QRE141J-222Y	2.2K 1/4W C RES.	
	R 69	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 76	QRE141J-102Y	1K 1/4W C RES.	
	R 80	QRE141J-222Y	2.2K 1/4W C RES.	
	R 82	QRE141J-102Y	1K 1/4W C RES.	
	R 83	QRE141J-102Y	1K 1/4W C RES.	
	R 84	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 91	QRE141J-103Y	10K 1/4W CARBON RES.	
	R 99	QRE141J-102Y	1K 1/4W C RES.	EE
	R101	QRE141J-271Y	270 1/4W C RES.	
	R102	QRE141J-391Y	390 1/4W C RES.	
	R110	QRE141J-123Y	12K 1/4W C RES.	EE
	R111	QRE141J-563Y	56K 1/4W C RES.	EE
	R112	QRE141J-103Y	10K 1/4W CARBON RES.	EE
	R113	QRE141J-563Y	56K 1/4W C RES.	EE
	R114	QRE141J-562Y	5.6K 1/4W C RES.	EE
	R115	QRE141J-184Y	180K 1/4W C RES.	EE
	R116	QRE141J-224Y	220K 1/4W C RES.	EE
	R117	QRE141J-623Y	62K 1/4W C RES.	EE
	R118	QRE141J-103Y	10K 1/4W CARBON RES.	EE
	R119	QRE141J-224Y	220K 1/4W C RES.	EE
	R120	QRE141J-224Y	220K 1/4W C RES.	EE
	R121	QRE141J-333Y	33K 1/4W C RES.	EE
	R122	QRE141J-224Y	220K 1/4W C RES.	EE
	R123	QRE141J-224Y	220K 1/4W C RES.	EE
	R124	QRE141J-103Y	10K 1/4W CARBON RES.	EE
	R125	QRE141J-103Y	10K 1/4W CARBON RES.	EE
	R126	QRE141J-333Y	33K 1/4W C RES.	EE
	R127	QRE141J-473Y	47K 1/4W C RES.	EE
	R128	QRE141J-473Y	47K 1/4W C RES.	EE
	R129	QRE141J-104Y	100K 1/4W C RES.	EE
	R130	QRE141J-104Y	100K 1/4W C RES.	EE
	R131	QRE141J-473Y	47K 1/4W C RES.	EE
	R132	QRE141J-102Y	1K 1/4W C RES.	EE
	R133	QRE141J-274Y	270K 1/4W C RES.	EE
	R134	QRE141J-274Y	270K 1/4W C RES.	EE
	R135	QRE141J-184Y	180K 1/4W C RES.	EE
	R136	QRE141J-184Y	180K 1/4W C RES.	EE
	R137	QRE141J-224Y	220K 1/4W C RES.	EE
	R138	QRE141J-224Y	220K 1/4W C RES.	EE
	R360	QRE141J-222Y	2.2K 1/4W C RES.	
	R362	QRE141J-221Y	220 1/4W C RES.	
	R363	QRE141J-391Y	390 1/4W C RES.	
	R370	QRE141J-102Y	1K 1/4W C RES.	
	R371	QRE141J-103Y	10K 1/4W CARBON RES.	
	R372	QRE141J-103Y	10K 1/4W CARBON RES.	
	R375	QRE141J-331Y	330 1/4W C RES.	
	R376	QRE141J-473Y	47K 1/4W C RES.	
	R378	QRE141J-104Y	100K 1/4W C RES.	
	R383	QRE141J-472Y	4.7K 1/4W C RES.	
	R384	QRE141J-472Y	4.7K 1/4W C RES.	
	R386	QRE141J-104Y	100K 1/4W C RES.	
	R387	QRE141J-473Y	47K 1/4W C RES.	
	R388	QRE141J-220Y	22 1/4W CARBON RES.	
	R389	QRE141J-225Y	2.2M 1/4W C RES.	
	R401	QRE141J-222Y	2.2K 1/4W C RES.	
	R402	QRE141J-222Y	2.2K 1/4W C RES.	
	R403	QRE141J-222Y	2.2K 1/4W C RES.	
	R404	QRE141J-222Y	2.2K 1/4W C RES.	
	R405	QRE141J-432Y	4.3K 1/4W C RES.	
	R406	QRE141J-432Y	4.3K 1/4W C RES.	
	R407	QRE141J-302Y	3K 1/4W C RES.	
	R408	QRE141J-302Y	3K 1/4W C RES.	
	R413	QRE141J-303Y	30K 1/4W C RES.	
	R414	QRE141J-303Y	30K 1/4W C RES.	
	R415	QRE141J-303Y	30K 1/4W C RES.	
	R416	QRE141J-303Y	30K 1/4W C RES.	
	R417	QRE141J-562Y	5.6K 1/4W C RES.	
	R418	QRE141J-562Y	5.6K 1/4W C RES.	
	R419	QRE141J-272Y	2.7K 1/4W C RES.	
	R420	QRE141J-272Y	2.7K 1/4W C RES.	
	R421	QRE141J-104Y	100K 1/4W C RES.	
	R422	QRE141J-104Y	100K 1/4W C RES.	
	R433	QRE141J-562Y	5.6K 1/4W C RES.	
	R434	QRE141J-562Y	5.6K 1/4W C RES.	
	R435	QRE141J-104Y	100K 1/4W C RES.	
	R436	QRE141J-104Y	100K 1/4W C RES.	
	R437	QRE141J-472Y	4.7K 1/4W C RES.	
	R438	QRE141J-472Y	4.7K 1/4W C RES.	
	R439	QRE141J-472Y	4.7K 1/4W C RES.	
	R440	QRE141J-472Y	4.7K 1/4W C RES.	
	R441	QRE141J-104Y	100K 1/4W C RES.	
	R442	QRE141J-104Y	100K 1/4W C RES.	
	R445	QRE141J-303Y	30K 1/4W C RES.	
	R446	QRE141J-303Y	30K 1/4W C RES.	
	R450	QRE141J-224Y	220K 1/4W C RES.	
	R459	QRE141J-472Y	4.7K 1/4W C RES.	
	R460	QRE141J-472Y	4.7K 1/4W C RES.	
	R461	QRE141J-222Y	2.2K 1/4W C RES.	
	R462	QRE141J-222Y	2.2K 1/4W C RES.	
	R463	QRE141J-103Y	10K 1/4W CARBON RES.	
	R464	QRE141J-103Y	10K 1/4W CARBON RES.	
	R465	QRE141J-102Y	1K 1/4W C RES.	
	R469	QRE141J-221Y	220 1/4W C RES.	
	R470	QRE141J-221Y	220 1/4W C RES.	
	R471	QRE141J-103Y	10K 1/4W CARBON RES.	
	R472	QRE141J-103Y	10K 1/4W CARBON RES.	
	R473	QRE141J-103Y	10K 1/4W CARBON RES.	
	R481	QRE141J-222Y	2.2K 1/4W C RES.	
	R482	QRE141J-222Y	2.2K 1/4W C RES.	
	R483	QRE141J-221Y	220 1/4W C RES.	
	R484	QRE141J-221Y	220 1/4W C RES.	
	R485	QRE141J-103Y	10K 1/4W CARBON RES.	
	R486	QRE141J-103Y	10K 1/4W CARBON RES.	
	R493	QRE141J-123Y	12K 1/4W C RES.	
	R494	QRE141J-123Y	12K 1/4W C RES.	
	R497	QRE141J-104Y	100K 1/4W C RES.	
	R498	QRE141J-104Y	100K 1/4W C RES.	
	R546	QRE141J-473Y	47K 1/4W C RES.	
	R547	QRE141J-473Y	47K 1/4W C RES.	
	R548	QRE141J-563Y	56K 1/4W C RES.	
	R549	QRE141J-563Y	56K 1/4W C RES.	
	R555	QRE141J-102Y	1K 1/4W C RES.	
	R556	QRE141J-102Y	1K 1/4W C RES.	
	R573	QRE141J-103Y	10K 1/4W CARBON RES.	
	R576	QRE141J-102Y	1K 1/4W C RES.	
	R578	QRE141J-103Y	10K 1/4W CARBON RES.	
	R579	QRE141J-102Y	1K 1/4W C RES.	
	R580	QRE141J-103Y	10K 1/4W CARBON RES.	
	R581	QRE141J-102Y	1K 1/4W C RES.	
	R582	QRE141J-102Y	1K 1/4W C RES.	
	R583	QRE141J-102Y	1K 1/4W C RES.	
	R584	QRE141J-102Y	1K 1/4W C RES.	
	R585	QRE141J-102Y	1K 1/4W C RES.	
	R586	QRE141J-103Y	10K 1/4W CARBON RES.	
	R587	QRE141J-102Y	1K 1/4W C RES.	

■ Electrical Parts List(Function,Tuner,Main Board)

Block No.02

⚠	Item	Parts Number	Description	Area
	R588	QRE141J-103Y	10K 1/4W CARBON RES.	
	R589	QRE141J-102Y	1K 1/4W C RES.	
	R592	QRE141J-102Y	1K 1/4W C RES.	
	R593	QRE141J-272Y	2.7K 1/4W C RES.	
	R594	QRE141J-181Y	180 1/4W C RES.	
	R595	QRE141J-181Y	180 1/4W C RES.	
	R597	QRE141J-222Y	2.2K 1/4W C RES.	
	R599	QRE141J-222Y	2.2K 1/4W C RES.	
	VR100	QVP0004-203Z	20K V.RES. I.M	EE
		OTHERS		
	J 1	QNB0014-001	ANT TERMINAL	
	J401	QNN0132-001	PIN JACK	
	J499	GP1F32T	OPTICAL JACK	
	L 1	QQR0884-001	COIL BLOCK	
	L 4	QQL231K-221Y	INDUCTOR	
	L 5	QQL231K-101Y	INDUCTOR	
	L 11	QQL231K-2R7Y	INDUCTOR	
	L 12	QQL231K-330Y	INDUCTOR	B,E,EN,EV
	L100	QQR0522-001	NOISE FILTER	EE
	L403	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	L405	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	L406	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	T 1	QQR0793-001	IFT	
	X 1	QAX0402-001	CRYSTAL	
	X 2	QAX0263-001Z	CRYSTAL	
	CF 1	QAX0403-001	CERAMIC FILTER	EE
		QAX0420-001	C FILTER	B,E,EN,EV
	CF 2	QAX0403-001	CERAMIC FILTER	EE
		QAX0421-001	C FILTER	B,E,EN,EV
	CF 3	QAX0519-001Z	CERAMIC FILTER	
	CN410	QGF1016F1-19	CONNECTOR	
	CN411	QGF1201C3-21	CONNECT TERMINAL	
	CN412	QGF1201C3-21	CONNECT TERMINAL	
	CN413	QGF1201C3-17	CONNECT TERMINAL	
	CN415	QGD2501C1-04Z	SOCKET ASSY	
	CN416	QGB2501J1-10	CONNECT TERMINAL	
	CN417	QGB2501J1-07	CONNECT TERMINAL	
	CN420	QGB2501J1-10	CONNECT TERMINAL	EE
	CN421	QGB2501K2-10	CONNECT TERMINAL	EE
	EP001	E409182-001SM	EARTH TERMINAL	
	TH401	QAD0064-2R2Z	POSISTOR I.M	
	TU 1	QAU0034-001	FM FRONT END	B,E,EN,EV
		QAU0036-001	FM FRONT END	EE

■ Electrical Parts List(System Control & Switch Board)

Block No.03

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC810	MN101C23DBP	I.C(M)	
	IC811	NJU3714D	I.C(M)	
	IC812	GP1U291Q	I.C(M)	
	IC853	TA8409S	I.C(MONO-ANALOG)	
	IC854	NJU3711D	I.C(MONO-ANALOG)	
		DIODES		
	D801	1SR35-100A-T5	SI DIODE	
	D803	1SS119-02-T2	SI DIODE	
	D804	1SS133-T2	SI.DIODE	
	D831	MTZJ5.1A-T2	SI.DIODE	
	D832	MTZJ5.1A-T2	SI.DIODE	
	D920	SLR-342DC-T	L.E.D.	
	D955	SLR-342MC-T	LED I.M	
	D956	SLR-342MC-T	LED I.M	
	D957	SLR-342MC-T	LED I.M	
	D958	SLR-342MC-T	LED I.M	
	D961	1SS133-T2	SI.DIODE	
	D962	SLR-342VC-T	L.E.D.	
	D981	SLR-342MC-T	LED I.M	
	D982	SLR-342MC-T	LED I.M	
	D983	SLR-342MC-T	LED I.M	
	D984	SLR-342MC-T	LED I.M	
	D991	SLR-342MC-T	LED I.M	
	D992	SLR-342MC-T	LED I.M	
	D993	SLR-342MC-T	LED I.M	
	D1041	1SS133-T2	SI.DIODE	
		TRANSISTORS		
	Q801	2SC2668/O/-T	TRANSISTOR TAPE	
	Q802	2SC2668/O/-T	TRANSISTOR TAPE	
	Q803	DTC114ES	DIGITAL TRANSISTOR	
	Q804	DTC114ES	DIGITAL TRANSISTOR	
	Q805	DTC114ES	DIGITAL TRANSISTOR	
	Q806	DTC114ES	DIGITAL TRANSISTOR	
	Q807	DTC114ES	DIGITAL TRANSISTOR	
	Q808	DTC114ES	DIGITAL TRANSISTOR	
	Q809	DTC114ES	DIGITAL TRANSISTOR	
	Q810	DTC114ES	DIGITAL TRANSISTOR	
	Q811	DTC114ES	DIGITAL TRANSISTOR	
	Q851	KTC3199/GL/-T	TR I/M	
	Q961	KRA102M-T	DIGITAL TRANSISTOR	
		CAPACITORS		
	C801	QFVJ1HJ-124Z	0.12MF 50V TF CAP.	
	C803	QETC0JM-477ZM	470MF 6.3V E.CAP.	
	C804	QETN0JM-108Z	1000MF 6.3V AL E.CAP.	
	C805	QCGB1HK-102	1000PF 50V CER.CAP.	
	C806	QCGB1HK-102	1000PF 50V CER.CAP.	
	C807	QCSB1HJ-390Y	39PF 50V CER.CAP.	
	C808	QCSB1HJ-330Y	33PF 50V CER.CAP.	
	C809	QCSB1HJ-330Y	33PF 50V CER.CAP.	
	C810	QCSB1HJ-390Y	39PF 50V CER.CAP.	
	C811	QCGB1HK-102	1000PF 50V CER.CAP.	
	C812	QCSB1HJ-220	22PF 50V CER.CAP.	
	C813	QCSB1HJ-270Y	27PF 50V CER.CAP.	
	C814	QCGB1HK-102	1000PF 50V CER.CAP.	
	C815	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C816	EETB1CM-476	47MF 16V E.CAP.	
	C817	EETC1HM-226ZJC	22MF 50V E.CAPA. I.M	
	C818	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C819	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C820	QCZ0205-155	1.5MF 25V C.CAP.	
	C821	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C831	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C832	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C834	QEKC0JM-226Z	22MF 16V CER.CAP.	
	C851	EETB1EM-106E	10MF 25V E.CAP.	
	C852	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C853	QCBB1HK-221Y	220PF 50V CER.CAP.	
	C854	EETC1EM-226ZE	22MF 25V E.CAP.	
	C855	QETB0JM-227	220MF 6.3V E.CAP.	
	C856	QETN1AM-107Z	100MF 10V AL E.CAP.	
	C857	EETC1CM-476ZJC	47MF 50V AL E.CAP.	
	C858	QCBB1HK-221Y	220PF 50V CER.CAP.	B,E,EN,EV
	C859	QCBB1HK-221Y	220PF 50V CER.CAP.	B,E,EN,EV
	C860	QFLM1HJ-103Z	0.01MF 50V CER.CAP.	B,E,EN,EV
	C971	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C972	QDYB1CM-103Y	0.01MF 16V CER.CAP.	
	C1001	QCGB1HK-102	1000PF 50V CER.CAP.	B,E,EN,EV
	C1002	QCGB1HK-102	1000PF 50V CER.CAP.	B,E,EN,EV
	C1003	QDGB1HK-102Y	1000PF 50V CER.CAP.	B,E,EN,EV
	C1004	QCGB1HK-102	1000PF 50V CER.CAP.	
	C1005	QCGB1HK-102	1000PF 50V CER.CAP.	
	C1006	QCGB1HK-102	1000PF 50V CER.CAP.	
	C1051	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C1052	QFVJ1HJ-104Z	0.1MF 50V TF CAP.	
	C1053	QDXB1CM-222Y	2200PF 16V C CAP.	
	C1054	QDXB1CM-222Y	2200PF 16V C CAP.	
	C1055	QFLM1HJ-393Z	0.039MF 50V M CAP.	
	C1056	QFLM1HJ-393Z	0.039MF 50V M CAP.	
		RESISTORS	-	
	R801	QRE141J-331Y	330 1/4W C RES.	
	R802	QRE141J-223Y	22K 1/4W C RES.	
	R803	QRE141J-223Y	22K 1/4W C RES.	
	R804	QRE141J-822Y	8.2K 1/4W C RES.	
	R805	QRE141J-822Y	8.2K 1/4W C RES.	
	R806	QRE141J-124Y	120K 1/4W C RES.	
	R807	QRE141J-103Y	10K - 1/4W CARBON RES.	
	R808	QRE141J-103Y	10K 1/4W CARBON RES.	
	R809	QRE141J-103Y	10K 1/4W CARBON RES.	
	R810	QRE141J-103Y	10K 1/4W CARBON RES.	
	R811	QRE141J-103Y	10K 1/4W CARBON RES.	
	R812	QRE141J-103Y	10K 1/4W CARBON RES.	
	R813	QRE141J-103Y	10K 1/4W CARBON RES.	
	R814	QRE141J-103Y	10K 1/4W CARBON RES.	
	R815	QRE141J-563Y	56K 1/4W C RES.	
	R816	QRE141J-563Y	56K 1/4W C RES.	
	R817	QRE141J-103Y	10K 1/4W CARBON RES.	
	R818	QRE141J-103Y	10K 1/4W CARBON RES.	
	R819	QRE141J-102Y	1K 1/4W C RES.	
	R820	QRE141J-102Y	1K 1/4W C RES.	
	R821	QRE141J-102Y	1K 1/4W C RES.	
	R822	QRE141J-102Y	1K 1/4W C RES.	
	R823	QRE141J-102Y	1K 1/4W C RES.	
	R824	QRE141J-102Y	1K 1/4W C RES.	
	R825	QRE141J-102Y	1K 1/4W C RES.	
	R826	QRE141J-102Y	1K 1/4W C RES.	
	R827	QRE141J-103Y	10K 1/4W CARBON RES.	
	R828	QRE141J-201Y	200 1/4W C.RES. I.M	
	R829	QRE141J-201Y	200 1/4W C.RES. I.M	
	R830	QRE141J-201Y	200 1/4W C.RES. I.M	
	R831	QRE141J-104Y	100K 1/4W C RES.	
	R832	QRE141J-104Y	100K 1/4W C RES.	
	R833	QRE141J-104Y	100K 1/4W C RES.	
	R834	QRE141J-104Y	100K 1/4W C RES.	
	R835	QRE141J-104Y	100K 1/4W C RES.	
	R836	QRE141J-104Y	100K 1/4W C RES.	
	R837	QRE141J-104Y	100K 1/4W C RES.	
	R838	QRE141J-102Y	1K 1/4W C RES.	
	R839	QRE141J-102Y	1K 1/4W C RES.	
	R840	QRE141J-103Y	10K 1/4W CARBON RES.	
	R841	QRE141J-103Y	10K 1/4W CARBON RES.	
	R842	QRE141J-103Y	10K 1/4W CARBON RES.	
	R843	QRE141J-103Y	10K 1/4W CARBON RES.	
	R844	QRE141J-103Y	10K 1/4W CARBON RES.	

■ *Electrical Parts List(System Control & Switch Board)*

⚠	Item	Parts Number	Description	Area
	R845	QRE141J-102Y	1K 1/4W C RES.	
	R846	QRE141J-102Y	1K 1/4W C RES.	
	R847	QRE141J-102Y	1K 1/4W C RES.	
	R848	QRE141J-102Y	1K 1/4W C RES.	
	R849	QRE141J-102Y	1K 1/4W C RES.	
	R850	QRE141J-103Y	10K 1/4W C RES.	
	R851	QRE141J-562Y	5.6K 1/4W C RES.	
	R852	QRE141J-3R9Y	3.9 1/4W C RES.	
	R853	QRE141J-183Y	18K 1/4W CARBON RES.	
	R854	QRE141J-332Y	3.3K 1/4W C RES.	
	R856	QRE141J-151Y	150 1/4W C RES.	
	R857	QRE141J-391Y	390 1/4W C.RES. I.M	
	R920	QRE141J-391Y	390 1/4W C.RES. I.M	
	R921	QRE141J-102Y	1K 1/4W C RES.	
	R922	QRE141J-102Y	1K 1/4W C RES.	
	R923	QRE141J-122Y	1.2K 1/4W C RES.	
	R924	QRE141J-152Y	1.5K 1/4W CARBON RES.	
	R925	QRE141J-222Y	2.2K 1/4W C RES.	
	R926	QRE141J-272Y	2.7K 1/4W C RES.	
	R927	QRE141J-392Y	3.9K 1/4W C RES.	
	R928	QRE141J-562Y	5.6K 1/4W C RES.	
	R931	QRE141J-102Y	1K 1/4W C RES.	
	R932	QRE141J-102Y	1K 1/4W C RES.	
	R933	QRE141J-122Y	1.2K 1/4W C RES.	
	R934	QRE141J-152Y	1.5K 1/4W CARBON RES.	
	R935	QRE141J-222Y	2.2K 1/4W C RES.	
	R936	QRE141J-272Y	2.7K 1/4W C RES.	
	R937	QRE141J-392Y	3.9K 1/4W C RES.	
	R938	QRE141J-562Y	5.6K 1/4W C RES.	
	R939	QRE141J-103Y	10K 1/4W CARBON RES.	
	R940	QRE141J-563Y	56K 1/4W C RES.	B,E,EN,EV
	R941	QRE141J-102Y	1K 1/4W C RES.	
	R942	QRE141J-102Y	1K 1/4W C RES.	
	R943	QRE141J-122Y	1.2K 1/4W C RES.	
	R944	QRE141J-152Y	1.5K 1/4W CARBON RES.	
	R945	QRE141J-153Y	15K 1/4W C RES.	
	R946	QRE141J-103Y	10K 1/4W CARBON RES.	
	R947	QRE141J-563Y	56K 1/4W C RES.	EE
	R948	QRE141J-104Y	100K 1/4W C RES.	
	R949	QRE141J-104Y	100K 1/4W C RES.	
	R951	QRE141J-102Y	1K 1/4W C RES.	
	R952	QRE141J-103Y	10K 1/4W CARBON RES.	
	R953	QRE141J-183Y	18K 1/4W CARBON RES.	
	R955	QRE141J-201Y	200 1/4W C.RES. I.M	
	R956	QRE141J-201Y	200 1/4W C.RES. I.M	
	R957	QRE141J-201Y	200 1/4W C.RES. I.M	
	R958	QRE141J-201Y	200 1/4W C.RES. I.M	
	R961	QRE141J-201Y	200 1/4W C.RES. I.M	
	R962	QRE141J-472Y	4.7K 1/4W C RES.	
	R963	QRE141J-102Y	1K 1/4W C RES.	
	R964	QRE141J-122Y	1.2K 1/4W C RES.	
	R981	QRE141J-201Y	200 1/4W C.RES. I.M	
	R982	QRE141J-201Y	200 1/4W C.RES. I.M	
	R983	QRE141J-201Y	200 1/4W C.RES. I.M	
	R984	QRE141J-201Y	200 1/4W C.RES. I.M	
	R985	QRE141J-103Y	10K 1/4W CARBON RES.	
	R986	QRE141J-183Y	18K 1/4W CARBON RES.	
	R992	QRE141J-152Y	1.5K 1/4W CARBON RES.	
	R993	QRE141J-222Y	2.2K 1/4W C RES.	
	R994	QRE141J-272Y	2.7K 1/4W C RES.	
	R995	QRE141J-392Y	3.9K 1/4W C RES.	
	R996	QRE141J-562Y	5.6K 1/4W C RES.	
	RA801	QRB169J-104	100K 1/10WRES. ARR	
	RA802	QRB169J-104	100K 1/10WRES. ARR	
	R1026	QRE141J-683Y	68K 1/4W C RES.	
	R1035	QRE141J-393Y	39K 1/4W C RES.	
⚠	R1051	QRJ146J-4R7X	4.7 1/4W UNF.CARBON R	
⚠	R1052	QRJ146J-4R7X	4.7 1/4W UNF.CARBON R	
	R1053	QRE141J-393Y	39K 1/4W C RES.	
	R1054	QRE141J-393Y	39K 1/4W C RES.	
	R1055	QRE141J-102Y	1K 1/4W C RES.	
		OTHERS		
		E3400-439	FELT SPACER	
		GV30032-001A	FL HOLDER	
	J 81	QNB0038-001	SPK.TERMINAL	EE
		QNB0088-001	SPEAKER TERMINAL	B,E,EN,EV
	J 82	QNN0017-001	PIN JACK	
	L801	QQL173K-470Z	INDUCTOR	
	L802	QQL231K-220Y	INDUCTOR	
	L803	QQL29BJ-100Z	INDUCTOR	
	L805	QQL173K-470Z	INDUCTOR	
	L806	QQL173K-470Z	INDUCTOR	
	L851	QQL29BJ-100Z	INDUCTOR	
	L852	QQR0779-001Z	INDUCTOR	
	L853	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	L1003	QQR0779-001Z	INDUCTOR	B,E,EN,EV
	S921	QSW0674-001Z	TACT SWITCH	
	S922	QSW0674-001Z	TACT SWITCH	
	S923	QSW0674-001Z	TACT SWITCH	
	S924	QSW0674-001Z	TACT SWITCH	
	S925	QSW0674-001Z	TACT SWITCH	
	S926	QSW0674-001Z	TACT SWITCH	
	S927	QSW0674-001Z	TACT SWITCH	
	S928	QSW0674-001Z	TACT SWITCH	
	S931	QSW0674-001Z	TACT SWITCH	
	S932	QSW0674-001Z	TACT SWITCH	
	S933	QSW0674-001Z	TACT SWITCH	
	S934	QSW0674-001Z	TACT SWITCH	
	S935	QSW0674-001Z	TACT SWITCH	
	S936	QSW0674-001Z	TACT SWITCH	
	S937	QSW0674-001Z	TACT SWITCH	
	S938	QSW0674-001Z	TACT SWITCH	
	S939	QSW0674-001Z	TACT SWITCH	
	S941	QSW0674-001Z	TACT SWITCH	
	S942	QSW0674-001Z	TACT SWITCH	
	S943	QSW0674-001Z	TACT SWITCH	
	S944	QSW0674-001Z	TACT SWITCH	
	S945	QSW0674-001Z	TACT SWITCH	
	S946	QSW0674-001Z	TACT SWITCH	
	S948	QSW0518-001	PUSH SWITCH	
	S949	QSW0518-001	PUSH SWITCH	
	S951	QSW0674-001Z	TACT SWITCH	
	S952	QSW0674-001Z	TACT SWITCH	
	S953	QSW0674-001Z	TACT SWITCH	
	S963	QSW0674-001Z	TACT SWITCH	
	S985	QSW0674-001Z	TACT SWITCH	
	S986	QSW0674-001Z	TACT SWITCH	
	S992	QSW0674-001Z	TACT SWITCH	
	S993	QSW0674-001Z	TACT SWITCH	
	S994	QSW0674-001Z	TACT SWITCH	
	S995	QSW0674-001Z	TACT SWITCH	
	S996	QSW0674-001Z	TACT SWITCH	
	S997	QSW0674-001Z	TACT SWITCH	
	X801	QAX0416-001Z	CERA LOCK	
	X802	QAX0401-001	CRYSTAL	
	CN115	QGB2510K2-06	CONNECTOR	
	CN810	QGF1201F3-21	VMC0332-R21	
	CN811	QGF1201F3-23	CONNECTOR	
	CN812	QGF1201F3-11	CONNECTOR	
	CN813	QGF1016F1-09	CONNECT TERMINAL	
	CN814	QGD2501C1-04Z	SOCKET ASSY	
	CN815	QGD2501C1-03Z	SOCKET ASSY	
	CN816	QGD2501C1-05Z	SOCKET ASSY	
	CN817	QGF1201C3-10	CONNECTOR	

■ Electrical Parts List(System Control & Switch Board)

⚠	Item	Parts Number	Description	Area
	CN856	QGF1201C3-21	CONNECT TERMINAL	
	CN857	QGF1201C3-23	CONNECTOR	
	CN858	QGD2501C1-05Z	SOCKET ASSY	B,E,EN,EV
	CN859	QGF1201C3-10	CONNECTOR	
	CN860	QGF1201C3-21	CONNECT TERMINAL	
	CN861	QGF1201C3-17	CONNECT TERMINAL	
	CN862	QGF1201C3-21	CONNECT TERMINAL	
	CN863	EMV5111-002	2P CONNECTOR	
	CN921	QGF1016F1-09	CONNECT TERMINAL	
	CN971	QGF1201F3-10	CONNECTOR	
	FL801	QLF0059-001	FL TUBE	
	FW901	QUM134-34DGZ4	FLAT WIRE	
	FW951	QUM027-08DGZ3	FLAT WIRE	
	FW961	QUM025-14DGZ3	FLAT WIRE	
	FW971	QUM026-07Z3Z3	FLAT WIRE	
	FW972	QUM025-07Z3Z3	FLAT WIRE	
	JS971	QSW0538-001	ROTARY SWITCH	
	J1001	QNS0030-001	JACK	
	L1001	QQL231K-470Y	INDUCTOR	B,E,EN,EV
	L1002	QQL231K-470Y	INDUCTOR	B,E,EN,EV
	L1003	QQL231K-2R2Y	INDUCTOR I.M	
	RY 1	QSK0057-001	RELAY	
	SP801	VYH7653-001	I.C.PROTECTOR	

■Electrical Parts List (CD Servo Control Board)

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 251	NCS21HJ-100X	C CAPACITOR	10PF 5% 50V	
	C 252	NCS21HJ-100X	C CAPACITOR	10PF 5% 50V	
	C 253	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 254	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 255	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 281	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 291	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 601	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
	C 602	NCB21HK-102X	C CAPACITOR	1000PF 10% 50V	
	C 603	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 604	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 605	NCS21HJ-271X	C CAPACITOR	270PF 5% 50V	
	C 606	NCS21HJ-181X	C CAPACITOR	180PF 5% 50V	
	C 607	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 608	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 610	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 611	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 612	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 613	NCS21HJ-101X	C CAPACITOR	100PF 5% 50V	
	C 614	NCB21HK-273X	C CAPACITOR	.027MF 10% 50V	
	C 615	NCB21HK-472X	C CAPACITOR	4700PF 10% 50V	
	C 616	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 617	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	C 621	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 623	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	C 624	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 631	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 632	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	C 633	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 651	NCS21HJ-120X	C CAPACITOR	12PF 5% 50V	
	C 652	NCS21HJ-150X	C CAPACITOR	15PF 5% 50V	
	C 653	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 654	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 655	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 656	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 657	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 658	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 661	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 662	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 663	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 664	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 665	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 666	NCS21HJ-471X	C CAPACITOR	470PF 5% 50V	
	C 667	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	C 668	NCB21HK-473X	C CAPACITOR	.047MF 10% 50V	
	C 671	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 672	QER41AM-107	E CAPACITOR	100MF 20% 10V	
	C 801	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
	C 802	NCB21HK-152X	C CAPACITOR	1500PF 10% 50V	
	C 811	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 812	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 813	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 814	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 821	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	C 822	QER41AM-227	E CAPACITOR	220MF 20% 10V	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 851	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 852	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 855	NCB21EK-104X	C CAPACITOR	.10MF 10% 25V	
	C 859	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	C 860	NCF21CZ-105X	C CAPACITOR	1.0MF +80:-20%	
	CN151	QGF1016F1-15	15FFC CONNECTOR	VIDEO CD	
	CN152	QGA2001F1-12	12P CN RIG	VIDEO CD	
	CN601	QGF1016F1-15	15FFC CONNECTOR	TRAVERSE	
	CN651	QGF1016F1-19	CONNECTOR	MAIN	
	CN652	QGF1016F1-05	CONNECTOR	OSD	
	CN653	QGF1016F1-13	CONNECTOR	CD TEXT	
	CN801	QGA2001C1-06	6P PLUG ASSY	TRAVERSE	
	CN851	QGD2503F1-03	SOCKET	DISC DETECTION	
	CN854	QGB2016K1-07	CONNECTOR	TRAY SWITCH	
	CN855	QGB2012K2-10	CONNECTOR	CAM SWITCH	
	IC251	UPD78055GCA37	IC	MICOM	
	IC601	AN8806SB-W	IC	RF AMP	
	IC651	MN35510	IC	DSP & DAC	
	IC801	BA6897FP-W	IC	PU DRIVE	
	IC851	TA8409S	IC	L MOTOR DRIVE	
	IC852	TA8409S	IC	R MOTOR DRIVE	
	L 851	QQL01BK-100Z	INDUCTOR	VS DE-COUPLE	
	L 853	QQL01BK-100Z	INDUCTOR	L MOTOR	
	L 854	QQL01BK-100Z	INDUCTOR	R MOTOR	
	Q 291	2SB1357/EF/-T	TRANSISTOR	/P.ON	
	Q 631	2SA1037AK/RS/-X	TRANSISTOR	APC	
	Q 842	DTA144ES-T	TRANSISTOR	/DISC	
	R 251	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 252	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 253	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 254	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 255	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 256	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 257	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 258	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 259	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 260	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 261	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 262	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 263	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 264	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 265	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 266	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 267	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 268	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 269	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 274	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 275	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 276	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 277	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 278	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 279	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 281	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 282	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 283	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 284	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 285	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 286	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 287	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 288	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 291	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 292	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 293	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 601	NRSA02J-274X	MG RESISTOR	270K 5% 1/10W	
	R 602	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
	R 603	NRSA02J-273X	MG RESISTOR	27K 5% 1/10W	
	R 604	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 605	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
	R 606	NRSA02J-474X	MG RESISTOR	470K 5% 1/10W	
	R 607	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 611	NRSA02J-113X	MG RESISTOR	11K 5% 1/10W	
	R 612	NRSA02J-125X	MG RESISTOR	1.2M 5% 1/10W	
	R 631	NRSA02J-2R2X	MG RESISTOR	2.2 5% 1/10W	
	R 632	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
	R 634	NRSA02J-120X	MG RESISTOR	12 5% 1/10W	
	R 635	NRSA02J-121X	MG RESISTOR	120 5% 1/10W	
	R 636	NRSA02J-910X	MG RESISTOR	91 5% 1/10W	
	R 651	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
	R 652	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 657	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 658	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 661	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 662	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	
	R 663	NRSA02J-124X	MG RESISTOR	120K 5% 1/10W	
	R 665	NRSA02J-683X	MG RESISTOR	68K 5% 1/10W	
	R 666	NRSA02J-155X	MG RESISTOR	1.5M 5% 1/10W	
	R 667	NRSA02J-562X	MG RESISTOR	5.6K 5% 1/10W	
	R 671	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 672	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 673	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 674	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 675	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 676	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 677	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 678	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 679	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 680	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 681	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 682	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 683	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 684	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
	R 685	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 686	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 687	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 688	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 689	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 690	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 691	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 692	NRSA02J-101X	MG RESISTOR	100 5% 1/10W	
	R 693	NRSA02J-471X	MG RESISTOR	470 5% 1/10W	

BLOCK NO. 04

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 694	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 801	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 802	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
	R 803	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 804	NRSA02J-154X	MG RESISTOR	150K 5% 1/10W	
	R 805	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 806	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 807	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 808	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 811	NRSA02J-473X	MG RESISTOR	47K 5% 1/10W	
	R 812	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 831	NRSA02J-151X	MG RESISTOR	150 5% 1/10W	
	R 832	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 842	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
	R 851	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 852	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 853	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 854	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 855	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 856	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 857	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
	R 859	NRSA02J-181X	MG RESISTOR	180 5% 1/10W	
	R 861	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 862	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 863	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 864	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 865	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 866	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 880	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 881	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 882	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 883	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 884	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 885	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 886	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 887	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	W 601	QUB220-07HPDT	SIN TWIST WIRE	D.GND	
	X 251	QAX0360-001Z	CRYSTAL	FOR IC251	
	X 651	QAX0413-001Z	CRYSTAL	FOR IC651	

■ Electrical Parts List (CD Changer Mechanism Switch Board)

BLOCK NO. 05

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN804	QGB2016J1-07	CONNECTOR		
	SW 1	QSW0507-001	LEVER SWITCH		
	SW 2	QSW0507-001	LEVER SWITCH		
	SW 3	QSW0507-001	LEVER SWITCH		
	SW 4	QSW0507-001	LEVER SWITCH		
	SW 5	QSW0507-001	LEVER SWITCH		
	SW 6	QSW0507-001	LEVER SWITCH		

■ Electrical Parts List (Cassette Mechanism Control Board)

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 101	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 102	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	C 103	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 104	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 105	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 106	NCB21HK-333X	C CAPACITOR	.033MF 10% 50V	
	C 107	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 108	NCB21HK-393X	C CAPACITOR	.039MF 10% 50V	
	C 110	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 111	QEK41HM-104	E CAPACITOR	.10MF 20% 50V	
	C 112	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 113	NCB21HK-332X	C CAPACITOR	3300PF 10% 50V	
	C 114	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 115	NCB21HK-153X	C CAPACITOR	.015MF 10% 50V	
	C 116	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
	C 117	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 119	NCB21HK-563X	C CAPACITOR	.056MF 10% 50V	
	C 120	NCS21HJ-330X	C CAPACITOR	33PF 5% 50V	
	C 201	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 202	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	C 203	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 204	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 205	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 206	NCB21HK-333X	C CAPACITOR	.033MF 10% 50V	
	C 207	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 208	NCB21HK-393X	C CAPACITOR	.039MF 10% 50V	
	C 210	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 211	QEK41HM-104	E CAPACITOR	.10MF 20% 50V	
	C 212	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 213	NCB21HK-332X	C CAPACITOR	3300PF 10% 50V	
	C 214	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 215	NCB21HK-153X	C CAPACITOR	.015MF 10% 50V	
	C 216	NCB21HK-822X	C CAPACITOR	8200PF 10% 50V	
	C 217	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 219	NCB21HK-563X	C CAPACITOR	.056MF 10% 50V	
	C 220	NCS21HJ-330X	C CAPACITOR	33PF 5% 50V	
	C 301	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 302	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 303	QEK41CM-226	E CAPACITOR	22MF 20% 16V	
	C 304	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 305	NCB21HK-393X	C CAPACITOR	.039MF 10% 50V	
	C 306	QEK40JM-227	E CAPACITOR	220MF 20% 6.3V	
	C 308	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
	C 309	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
	C 310	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 311	NCB21HK-682X	C CAPACITOR	6800PF 10% 50V	
	C 313	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 314	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C 315	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C 316	QFG32AJ-103Z	PP CAPACITOR	.010MF 5% 100V	
	C 318	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 319	QFG32AJ-821Z	TF CAPACITOR	820PF 5% 100V	
	C 321	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 322	QFG32AJ-152Z	M CAPACITOR	1500PF 5% 100V	
	C 327	QEK41CM-476	E CAPACITOR	47MF 20% 16V	

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 328	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 329	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 330	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 332	NCS21HJ-151X	C CAPACITOR	150PF 5% 50V	
	C 335	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 336	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 337	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 338	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 339	QEK41CM-476	E CAPACITOR	47MF 20% 16V	
	C 340	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 341	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 342	QEK41EM-475	E CAPACITOR	4.7MF 20% 25V	
	C 343	QET41CM-106	E CAPACITOR	10MF 20% 16V	
	C 344	NCB21HK-472X	C CAPACITOR	4700PF 10% 50V	
	C 345	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	CN301	QGF1205F1-06	CONNECTOR		
	CN302	QGF1205F1-06	CONNECTOR		
	CN303	QGB2011M1-10	PWB CONECTOR		
	CN304	QGB2011M1-10	PWB CONECTOR		
	CN305	QGF1205F1-10	CONNECTOR		
	CN306	QGF1205F1-11	CONNECTOR		
	D 307	HZM5.1NB2-X	CHIP Z DIODE		
	D 308	HZM5.1NB2-X	CHIP Z DIODE		
	D 309	MA704A-X	S.K.DIODE		
	IC301	BA3126N	IC		
	IC302	AN7345K	IC		
	IC303	BU4094BCF-X	IC		
	IC304	BU4094BCF-X	IC		
	L 301	QQR0620-001	OSC COIL(BIAS)		
	L 303	QQL01BK-100Z	INDUCTOR		
	Q 102	DTC144TKA-X	TRANSISTOR		
	Q 103	DTC144EKA-X	TRANSISTOR		
	Q 105	2SC3576-JVC-T	TRANSISTOR		
	Q 202	DTC144TKA-X	TRANSISTOR		
	Q 203	DTC144EKA-X	TRANSISTOR		
	Q 205	2SC3576-JVC-T	TRANSISTOR		
	Q 302	2SC2001/K/-T	TRANSISTOR		
	Q 303	2SC2001/K/-T	TRANSISTOR		
	Q 304	2SC3576-JVC-T	TRANSISTOR		
	Q 305	2SC3576-JVC-T	TRANSISTOR		
	Q 306	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 307	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 308	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 309	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 312	2SB562/C/-T	TRANSISTOR		
	Q 313	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 314	2SB562/C/-T	TRANSISTOR		
	Q 315	2SC2412K/RS/-X	CHIP TRANSISTOR		
	Q 316	2SA952/LK/-T	TRANSISTOR		
	Q 317	DTC124EKA-X	TRANSISTOR		
	Q 321	DTC144EKA-X	TRANSISTOR		
	Q 322	DTC144EKA-X	TRANSISTOR		
	Q 323	2SC2412K/RS/-X	CHIP TRANSISTOR		
	R 102	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 103	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 105	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 106	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
	R 107	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 108	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 109	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 111	NRSA02J-562X	MG RESISTOR	5.6K 5% 1/10W	
	R 112	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 113	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
	R 114	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
	R 115	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 117	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 118	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 119	NRSA02J-203X	MG RESISTOR	20K 5% 1/10W	
	R 120	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 121	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 202	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 203	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
	R 205	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 206	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
	R 207	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 208	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 209	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 211	NRSA02J-562X	MG RESISTOR	5.6K 5% 1/10W	
	R 212	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 213	NRSA02J-271X	MG RESISTOR	270 5% 1/10W	
	R 214	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
	R 215	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 217	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 218	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 219	NRSA02J-203X	MG RESISTOR	20K 5% 1/10W	
	R 220	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 221	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 301	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
	R 302	NRS181J-101X	MG RESISTOR	100 5% 1/8W	
	R 304	NRSA02J-393X	MG RESISTOR	39K 5% 1/10W	
	R 305	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 306	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 307	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 308	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 309	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 310	NRS181J-820X	MG RESISTOR	82 5% 1/8W	
	R 311	NRS181J-820X	MG RESISTOR	82 5% 1/8W	
	R 313	NRSA02J-3R3X	MG RESISTOR	3.3 5% 1/10W	
	R 314	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 315	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
	R 316	NRSA02J-223X	MG RESISTOR	22K 5% 1/10W	
	R 317	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
	R 318	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 319	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 321	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 322	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 327	NRSA02J-474X	MG RESISTOR	470K 5% 1/10W	
	R 328	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 329	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 330	NRSA02J-0R0X	MG RESISTOR	5% 1/10W	

BLOCK NO. 06

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 335	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 336	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
	R 338	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 339	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 341	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 343	NRSA02J-0R0X	MG RESISTOR	5% 1/10W	
	R 345	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 346	NRSA02J-0R0X	MG RESISTOR	5% 1/10W	
	R 347	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
	R 348	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 350	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
	R 351	NRSA02J-151X	MG RESISTOR	150 5% 1/10W	
	R 353	NRSA02J-472X	MG RESISTOR	4.7K 5% 1/10W	
	R 354	NRSA02J-151X	MG RESISTOR	150 5% 1/10W	
	R 355	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 357	NRSA02J-103X	MG RESISTOR	10K 5% 1/10W	
	R 358	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 359	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 360	NRSA02J-433X	MG RESISTOR	43K 5% 1/10W	
	R 361	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
	R 362	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 363	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
	R 364	NRSA02J-433X	MG RESISTOR	43K 5% 1/10W	
	R 365	NRSA02J-203X	MG RESISTOR	20K 5% 1/10W	
	R 366	NRSA02J-123X	MG RESISTOR	12K 5% 1/10W	
	R 367	NRSA02J-102X	MG RESISTOR	1.0K 5% 1/10W	
	R 368	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
	R 369	NRSA02J-391X	MG RESISTOR	390 5% 1/10W	
	R 371	NRS181J-222X	MG RESISTOR	2.2K 5% 1/8W	
	R 374	NRSA02J-912X	MG RESISTOR	9.1K 5% 1/10W	
	R 375	NRSA02J-683X	MG RESISTOR	68K 5% 1/10W	
	R 376	NRS181J-6R8X	MG RESISTOR	6.8 5% 1/8W	
	VR101	QVP0008-503Z	SEMI V RESISTOR		
	VR201	QVP0008-503Z	SEMI V RESISTOR		
	VR301	QVP0008-103Z	SEMI V RESISTOR		
	WIRE	VWS304-10A13K	FLAT WIRE		

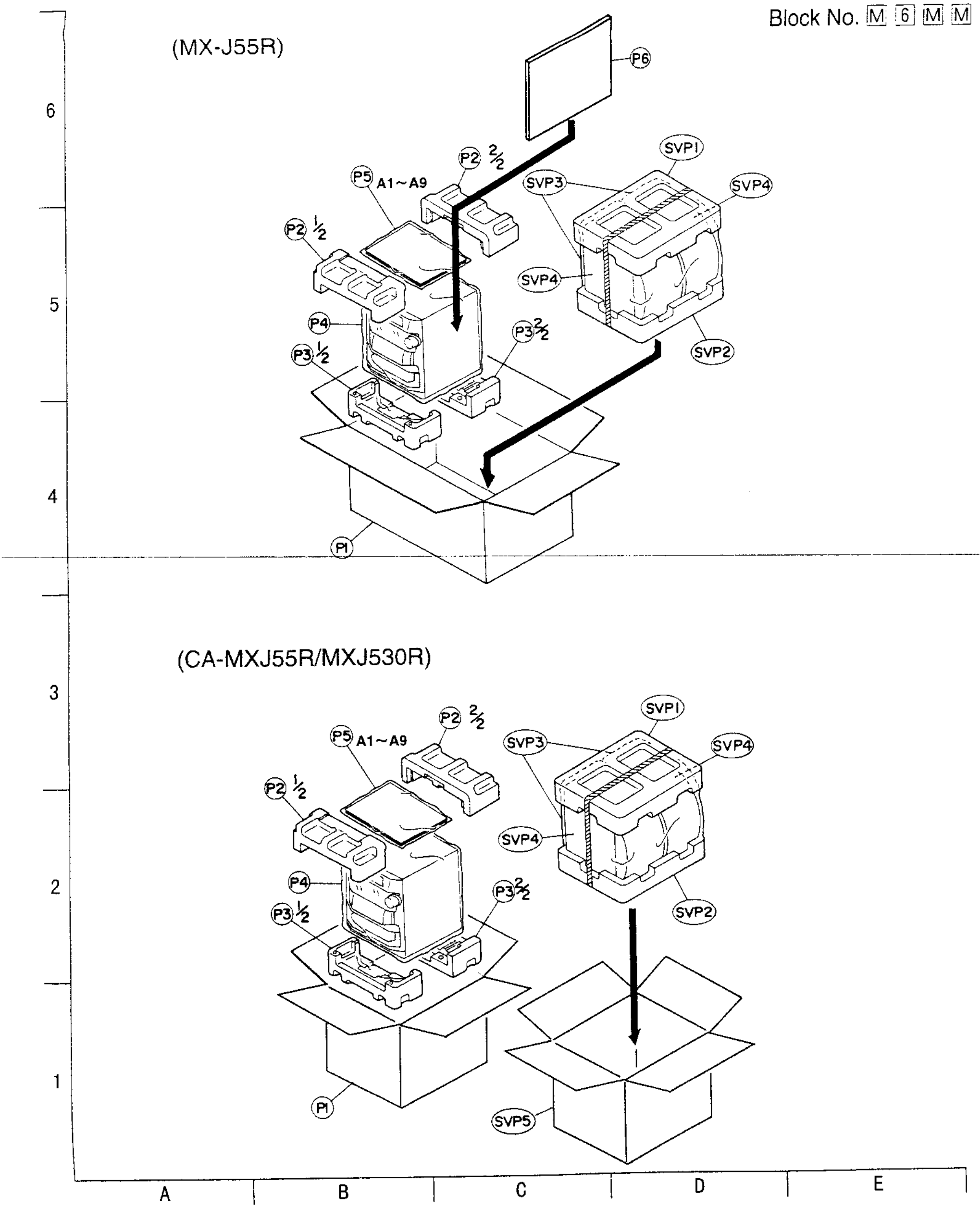
Electrical Parts List (Cassette Mechanism Switch Board)

BLOCK NO. 07

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN 1	QGB2011L1-10	10P PLUG ASSY		
	D 1	1SR139-100-T2	SI DIODE		
	IC 1	SG-105F3-BB,C	PHOTO SENSER		
	P 1	QNZ0104-001	POST PIN		
	SW 2	QSW0832-001	CASSETTE SWITCH	TAPE	
	SW 4	QSW0832-001	CASSETTE SWITCH	70U	
	SW 6	QSW0507-001	SWITCH		

Packing Materials and Accessories Parts List

Block No. M 5 M M
Block No. M 6 M M



■ Packing Parts List

Block No.M5MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	P1	GV20036-013A	PACKING CASE	1	MX-J55R	
		GV20041-005A	PACKING CASE	1	CA-MXJ55R	
		GV20041-006A	PACKING CASE	1	CA-MXJ530R	
	P2	GV10016-003A	UPPER CUSHION	1	MX-J55R	
		GV10018-002A	UPPER CUSHION	1	CA-MXJ55R/MXJ530R	
	P3	GV10017-002A	BOTTOM CUSHION	1	MX-J55R	
		GV10019-002A	BOTTOM CUSHION	1	CA-MXJ55R/MXJ530R	
	P4	QPC06506515P	POLY BAG	1		
	P5	QPC02503515P	POLY BAG	1		
	P6	GV40047-001A	CORRUGATED	1	MX-J55R	
	SVP 1	720-TSPJ55-00	SPEAKER CUSHION(UPPER)	1	MX-J55R/CA-MXJ55R	
		720-TMXJ70-00	SPEAKER CUSHION(UPPER)	1	CA-MXJ530R	
	SVP 2	720-BSPJ55-00	SPEAKER CUSHION(BOTTOM)	1	MX-J55R/CA-MXJ55R	
		720-BMXJ70-00	SPEAKER CUSHION(BOTTOM)	1	CA-MXJ530R	
	SVP 3	700-120034-20	POLY BAG	2		
	SVP 5	GV20036-010A	SPEAKER PACKING CASE	1	CA-MXJ55R	
		GV20036-011A	SPEAKER PACKING CASE	1	CA-MXJ530R	

■ Accessories Parts List

Block No.M6MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	A1	GVT0012-006A	INSTRUCTION BOOK	1	CA-MXJ55R/MXJ530R	E
		GVT0012-007A	INSTRUCTION BOOK	1	CA-MXJ55R/MXJ530R	EN
		GVT0012-008A	INSTRUCTION BOOK	1	CA-MXJ55R/MXJ530R	B
		GVT0012-009A	INSTRUCTION BOOK	1	CA-MXJ55R/MXJ530R	EV
		GVT0012-010A	INSTRUCTION BOOK	1	MX-J55R	EE
	A2	EWP503-001	ANTENNA WIRE	1		
	A3	BT-54008-2	WARRANTY CARD	1		B,E,EN
	A4	E43486-340A	SAFETY SHEET	1		B
	A5	VNA3000-202	REGISTER CARD	1		B
	A6	BT-54012-1	W.CARD	1		EE,EV
	A7	RM-SMXJ55R	WIRE-LESS REMOTE CONTROL	1		
	A8	---------------	BATTERY	1		
	A9	QAL0014-001	LOOP ANTENNA	1		
	SVP 4	MXJ50K-SPBOX-L	SPEAKER BOX(L)	1	MX-J55R/CA-MXJ55R	
		MXJ50K-SPBOX-R	SPEAKER BOX(R)	1	MX-J55R/CA-MXJ55R	
		MXJ56K-SPBOX-L	SPEAKER BOX(L)	1	CA-MXJ530R	
		MXJ56K-SPBOX-R	SPEAKER BOX(R)	1	CA-MXJ530R	

Electrical Parts List (Cassette Mechanism Switch Board)

BLOCK NO. 08

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	CN 1	QGB2011L1-10	10P PLUG ASSY		
	D 1	1SR139-100-T2	SI DIODE		
	IC 1	SG-105F3-BB,C	PHOTO SENSER		
	P 1	QNZ0104-001	POST PIN		
	SW 1	QSW0832-001	CASSETTE SWITCH	R.REC	
	SW 2	QSW0832-001	CASSETTE SWITCH	TAPE	
	SW 4	QSW0832-001	CASSETTE SWITCH	70U	
	SW 5	QSW0832-001	CASSETTE SWITCH	F.REC	
	SW 6	QSW0507-001	SWITCH		